

DOT's Combined Performance Plan and Report

The Department of Transportation (DOT) is committed to managing for results. Transportation is a key element in the production of products and services in the U.S., as well as in supporting our national defense. Everything we do at DOT is aimed at making measurable improvements in our transportation system, the security of our nation, and the quality of American life.

This year marks another significant advance in managing for results at DOT. Two years ago we published our first Department-wide performance plan, for fiscal year (FY) 1999. This year we are pleased to report on the measures and targets we aimed to achieve in that plan. But we are doing more than just reporting those results. In order to make our goals and results more useful to our stakeholders, we have chosen to combine our report on 1999 results with our plan for 2001 performance. At DOT we have come to understand that using measurement to manage will only succeed when we understand historical trends, study recent results, and then integrate this information into strategies and resource decisions. By putting this information in one document, we hope we have created a tool that is more relevant and useful to you, the reader.

Our Combined Performance Plan (FY 2001) and Report (FY 1999) still supports the planning and reporting framework that is integral to managing for results:

The Department of Transportation's Strategic Plan provides a comprehensive vision for advancing the nation's complex and vital transportation system into the 21st Century. The plan sets forth the strategy for DOT for Fiscal Years (FYs) 1997 through 2002, setting broad goals, targeting outcomes and identifying key challenges.

The DOT Performance Plan is a companion piece to the DOT Strategic Plan and to the DOT Fiscal Year 2001 Budget Request. The Performance Plan defines those performance indicators and goals we will use to measure our progress toward achieving our strategic goals. By linking these goals to the budget, it describes one fiscal year's effort within DOT and shows how this effort fits into the long-range plan for the Department and the U.S. transportation system.

The DOT Performance Report—combined with the plan this year—provides a public accounting of performance against the goals in the FY 1999 plan. The report on performance for FY 2000 will be provided in March 2001, and the report on performance for goals in this plan will be provided in March 2002.

The DOT Strategic Plan

The DOT Strategic Plan sets forth the overall direction, vision, and mission of the Department. The Strategic Plan covering this Performance Plan is dated September 1997 and covers the years 1997 through 2002. In that plan, citing the Department's enabling legislation from 1966, the purpose of the Department is described:

"The national objectives of general welfare, economic growth and stability, and security of the United States require the development of transportation policies and programs that contribute to providing fast, safe, efficient, and convenient transportation at the lowest cost consistent with those and other national objectives, including the efficient use and conservation of the resources of the United States."

The Secretary of Transportation has articulated his vision of how the Department will carry out its purpose. This is captured in the Strategic Plan as a statement to be used by all Department employees in framing their approach to the DOT mission. The Strategic Plan also provides a mission statement to describe the underlying purpose for Departmental activities, and identifies five Strategic Goals that capture the most important outcomes influenced by the Department's programs:

VISION STATEMENT

“A visionary and vigilant Department of Transportation leading the way to transportation excellence in the 21st Century.”

MISSION STATEMENT

“Serve America by ensuring a safe, fast, efficient, accessible and convenient transportation system that meets our vital national interests and enhances the quality of life of the American people, today and into the future.”

DOT STRATEGIC GOALS

Safety - Promote the public health and safety by working toward the elimination of transportation-related deaths, injuries, and property damage.

Mobility - Shape America's future by ensuring a transportation system that is accessible, integrated, efficient, and offers flexibility of choices.

Economic Growth and Trade - Advance America's economic growth and competitiveness domestically and internationally through efficient and flexible transportation.

Human and Natural Environment - Protect and enhance communities and the natural environment affected by transportation.

National Security - Advance the nation's vital security interests in support of national strategies such as the National Security Strategy and National Drug Control Strategy by ensuring that the transportation system is secure and available for defense mobility and that our borders are safe from illegal intrusion.

How We Will Achieve Our Strategic Goals

The Department will achieve its Strategic Goals through its leadership role in U.S. transportation policy, operations, investment, and research. To influence results, DOT programs rely on a number of common interventions and actions. These include:

- ☐ *Direct operations*, such as air traffic control, vessel traffic services, and military operations.
- ☐ *Infrastructure investments*, such as highway, rail, and transit investment, and grants for airport improvement.
- ☐ *Capital investment*, such as new Air Traffic Control system components, Coast Guard vessels, and Amtrak.
- ☐ *Financial Tools*, such as loan guarantees for shipbuilding.
- ☐ *Rulemaking*, such as equipment, vehicle or operator standards, and elimination of trade barriers.
- ☐ *Enforcement* to ensure compliance, including inspections, investigations, and penalty action.
- ☐ *Technology development and application*, such as fostering new materials and technologies in transportation, and transportation related research.
- ☐ *Education*, such as consumer awareness, and campaigns to influence personal behavior.

Some of these interventions and actions reside entirely within the Federal government, but most involve significant partnering with state and local authorities and with the transportation industry. These are the broad areas of action DOT – and state and local governments – commonly use to bring about desired results. Tax expenditures are also a significant tool by which the Federal government encourages transportation investment, but do not represent a key tool of intervention by DOT.

This Combined Performance Plan and Report focuses on DOT's five strategic goal areas, the FY 2001 resources and activities that will help us achieve results, and the results we saw in FY 1999. At the same time, some activities are internal ones – like financial management, procurement, and personnel -- without which the Department could not operate or hope to achieve its goals. The Corporate Management Strategies section of this plan focuses on staff and support activities, discussing this critical area of performance. The most important new area of emphasis in our day-to-day management of programs and actions is our determination to become ONE DOT capable of acting as an integrated, purposeful leader to optimize transportation efficiency and effectiveness. ONE DOT means that our operating administrations work together as a single team to support our interdependent and intermodal transportation system.

How We're Organized

DOT employs about 100,000 civilian and military people across the country, in the Office of the Secretary of Transportation (OST) and through eleven operating administrations and bureaus, each with its own management and organizational structure:

Federal Aviation Administration	National Highway Traffic Safety Administration
Federal Highway Administration	Research and Special Programs Administration
Federal Motor Carrier Safety Administration	St. Lawrence Seaway Development Corporation
Federal Railroad Administration	United States Coast Guard
Federal Transit Administration	Bureau of Transportation Statistics
Maritime Administration	

The Office of the Secretary of Transportation provides overall leadership, management direction, and administers aviation economic programs. The Transportation Administrative Service Center provides administrative support. The Office of Inspector General (OIG) and the Surface Transportation Board (STB), while formally a part of DOT, are decisionally independent by law and are not part of this plan.

How We Select Our Performance Goals

Performance goals can range from outputs, to intermediate outcomes, to ultimate outcomes. DOT focuses on outcomes because these convey a better sense of value to the American public. Outcomes are the reason we exist as a Department. However, not all performance goals are at the same level on this continuum. For example, our goals for seat belt use and grade crossing crashes both contribute to the ultimate outcomes of reduced fatality and injury rates – also DOT performance goals. Similarly, our goal for Intelligent Transportation Systems (ITS) integration contributes to improvements that reduce highway congestion, mobile source emissions, promote energy efficiency and safety (fatalities and injuries). All of these are included in the DOT Performance Plan because together they help tell the story of what we are aiming to accomplish, and how.

We have tried where possible to select performance measures that address activities in each area of DOT work. When considered along with external factors and information revealed in program evaluations, these measurements provide valuable insight into the performance of DOT programs. These measures, and the discussion of means and strategies under each, are not meant to illustrate every activity and performance indicator in the Department. This Performance Plan is necessarily a top-level depiction of managing for results within DOT. It is meant to be read in conjunction with the budgets of the individual operating administrations, which provide more detailed and program specific performance measures and budget justification.

How We Have Combined Our Plan for 2001 with Our Report for 1999

This year DOT is submitting a single document that combines the Performance Report for FY 1999 and the Performance Plan for FY 2001. In each strategic goal area, we present the key performance goals we will use in FY 2001 to guide our activities and judge our results, along with the goals we identified in the FY 1999 plan and our performance against them. For each performance goal we provide:

Component	Integral to Performance Planning	Integral to Performance Reporting
• A description of the challenge we face – the reason for action	✓	✓
• The measure or measures we are using to judge success, and the FY 1999-2001 goals for each	✓	✓
• Historical data – ten year baseline where data are available	✓	✓
• The external factors that may present special challenges in achieving our goal;	✓	✓
• A cross-reference to common outcomes with other agencies	✓	✓
• An analysis of what happened in 1999		✓
• An assessment of the FY 2000 plan, based on the 1999 results		✓
• FY 2001 activities, resources, and any significant legislation or regulations we propose	✓	
• Special management challenges (when related to goal)	✓	✓

Data details including the source, scope and data limitations for each performance goal are provided in Appendix I.

Our 1999 Results: A Reader's Guide

DOT has measured and assessed performance in various programs for some time, but this year marks the first time we have presented a top level look at outcomes across the entire Department, just six months after the end of the fiscal year. We have found this an exciting – and challenging – project. To present information meaningfully, we have recognized some general rules about data and data interpretation in preparing this report.

The Relationship between DOT's Activities and Observed Results: The relationship between resources and results can be complex. Results of direct service programs, such as Coast Guard migrant interdiction, are significantly influenced by current year activities. Others results, such as highway congestion or transit ridership, are predominately influenced by prior year funding. Almost all results are influenced by a mix of current and prior-year activity. Performance trends and current year outcomes should be viewed with this understanding.

Fiscal Year versus Calendar Year: Most DOT results are reported for FY 1999 (October 1998 to September 1999). Many DOT safety programs report results for calendar year 1999 (January 1999 to December 1999). This is because the data for many safety programs have long been aligned around calendar years. Shifting to FY would make past-year comparisons difficult, adding confusion with little benefit to program management. We have been careful to note whether results and trends are in CY or FY. Either is a satisfactory indicator for 1999 performance.

Preliminary and Final Results for 1999: Closing out and reporting 1999 results by March of 2000 was challenging, particularly where we had to rely on third party reporting. Often we have our previous year's results by March, but must wait for final data or proper verification and validation. For this reason, DOT's Performance Report for 1999 distinguishes between *preliminary results* and results. *Preliminary results* provide a reasonable, quantitative assessment

of our outcomes, but the reader should expect them to be adjusted after final compilation or verification and validation. Results that are final are not expected to need significant revision.

Single Years Results versus the Historical Trends: Federal and state programs rarely aim to influence simple things. We tackle tough problems such as safety, pollution, and congestion at the national level. Sometimes we see progress overwhelmed by external factors, such as economic growth (or recession), market shifts, extreme weather, and other factors. Sometimes we get a “helping hand” from those same factors. In most outcomes there is natural fluctuation year to year – you can see it clearly in the ten-year trend lines.

DOT sets annual targets for the outcomes it aims to influence, regardless of these factors. Targets set a mark so we can judge our progress. They also force us to think hard about what we can – and can’t – do to get results. We have reported single year results for 1999. There is no simple formula that ties the results in one year to the success or failure of programs. DOT’s 1999 Performance Report invites the reader to “look over our shoulder” at the real-world picture we are studying as we try to make transportation – and the lives of Americans -- better.

Performance Progress Report: To help interpret single year results and historical trends, we have provided a Performance Progress Report at the front of each strategic goal section. These tables provide data from 1993-1999, DOT’s 1999 target, and a quick assessment of whether the target was met or a good trend was observed. Judging a good trend is sometimes difficult – we have looked for either an improvement from 1995 to 1999, or a move in the right direction in the last year. The significance of some trends is hard to assess. For this reason, we provide 1993-1995 data as well as graphs on each goal page. Readers should always view 1999 results with eye both to the target and the long-term trend.

Our 2001 Plan: A Reader’s Guide

Fiscal Year 2001 marks our third DOT Performance Plan. This year’s product builds on the suggestions of our stakeholders and what we have learned within our own programs. Again, several broad principals have guided us in presenting our performance plan:

Setting Annual Performance Targets: DOT’s targets for 2001 reflect the gains we think we can make in each goal area. There’s no exact science to calibrating “targets” to resources. The goals we’ve set reflect a combination of current funding, past funding, program initiatives, and the actions of our partners. There is also an element of “stretch” in our goals. We are not scared of missing some of these targets – provided they were realistic, challenging, and in the end we were able to move results in the right direction.

How We Have Improved Some Measures: This is our third year of performance planning – and of verification and validation. In a number of cases we have found better ways to define the measure or sort the data, creating a more sensitive and realistic indicator. In some cases we have developed entirely new measures. We will continue to improve measures where we think it will improve our management and our accountability. Where we have replaced 1999 measures with new indicators, we still report results on the original 1999 goals – we feel this is important for accountability (see page 55 for an example). We include no 2001 strategies and initiatives for these goals; rather, strategies and initiatives are included for the replacement measures. Where we have refined and improved a measure, we present the “old” trend line along with several years of historical data in the “new” format. This permits the reader to see the degree of offset, and compare trends before and after the change (see page 32 for an example).

FY 2001 Resources and Our Goals: The budgeted resources of DOT support the broad range of DOT strategic goals. This illustrates a fundamental strength of DOT programs—that existing capacity delivers public value in multiple goal areas. By design, a dollar spent on transportation infrastructure may also advance safety, mobility, economic growth, the mitigation

Special Focus: Management Challenges

Our performance measures and results are the focus of this combined plan and report. Transportation outcomes are what we aim for, every day. But how we achieve these results is also vitally important. The public entrusts us not only to improve transportation safety and performance, but also to manage our resources and programs wisely. Throughout this plan and report we identify the key management challenges we must address and overcome as we work towards meeting specific performance goals.

of harmful impacts, or national security. Because of this, the program activities found in the DOT Program and Financing (P&F) schedules are both *consolidated* and *disaggregated* in order to align with strategic and performance goals. Multiple program activities sometimes support multiple goals, and for efficiency some programs (such as administrative, legal, or facilities support) provide common support across all strategic goals. The allocation of resources (estimated obligations) to the five strategic goals is shown in Appendix II.

Tables showing the full allocation of *direct* program spending (such as direct safety spending, or direct mobility spending) are found at the end of each strategic goal section. This plan refers to *direct programs* as those *principally aimed at specific strategic goals*.

STRATEGIC GOAL: SAFETY

Promote the public health and safety by working toward the elimination of transportation-related deaths, injuries, and property damage.

Safety is our most important strategic goal. Transportation enables the movement of people and goods, fueling our economy and improving our quality of life. However, transportation exposes people, property and freight to the risk of harm. We strive to improve the benefits of transportation while constantly reducing the risk to health and well being. The FY 2001 budget proposes \$4 billion for direct safety programs to meet this challenge—a 13% increase over 2000.

We Aim To Achieve These Strategic Outcomes:

- Reduce the number of transportation-related deaths.
- Reduce the number and severity of transportation-related injuries.
- Reduce the rate of transportation-related fatalities per passenger-mile-traveled and per ton-mile of total freight shipped (or vehicle miles traveled).
- Reduce the rate and severity of transportation-related injuries per passenger-mile-traveled and per ton-mile (or vehicle miles traveled).
- Reduce the dollar loss from high-consequence, reportable transportation incidents.
- Reduce the number of reportable transportation incidents and their related economic costs.

This section includes a report on how we did on achieving the goals in our 1999 Performance Plan, beginning with a discussion of aggregate transportation safety in the U.S., with data compiled across all modes.

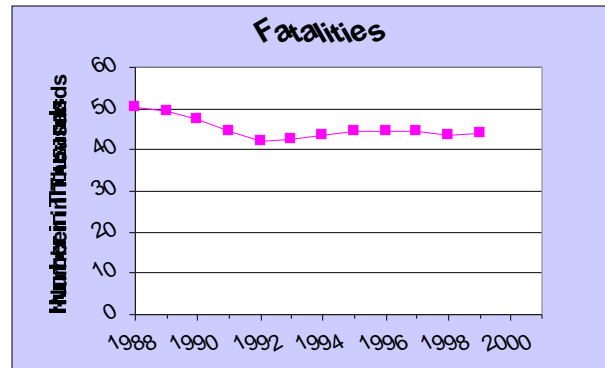
We also include a Performance Progress Report for 1993-1999. Alongside our 1999 results, we note if the target (goal) was met. If the goal was missed but recent data show the trend responding in a good direction, we note that important result. A detailed analysis of performance results for 1999 and our strategies and initiatives for 2001 follows the Performance Progress Report. Our discussion of Safety concludes with a presentation of Safety Program Direct Spending.

PERFORMANCE MEASURES:

Highway fatality and injury rates
Alcohol related highway fatalities
Seat belt use
Large truck-related fatalities and injuries
Air carrier fatal accident rate
General aviation fatal accidents
Runway incursions
Operational errors (Air Traffic)
Recreational boating fatalities
Mariner rescue
Passenger vessel safety
Maritime worker fatality rate
Rail accident and fatality rates
Highway-Rail grade crossing accident rate
Rail trespasser fatality rate
Transit fatality and injury rates
Pipeline failures
Hazardous material incidents

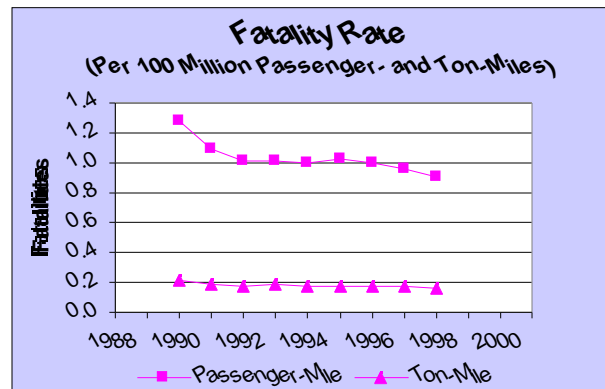
Fatalities:

After several years of decline, the overall number of transportation fatalities grew from 1993 to 1995, and then became essentially steady from 1995 to 1997. A slight downward movement appears again in 1998. Based on preliminary data, there was virtually no change in the number of transportation fatalities between 1998 and 1999. (Preliminary estimates for 1999 are available only for the number of fatalities and the number of injured persons. Data for the other transportation-wide safety measures will be available by the end of 2000.)



A reduction in highway fatalities in 1999, which account for approximately 94% of all transportation fatalities, accounts for the direction of the overall fatalities. While relatively small, the decrease is more substantial in the context of rising miles of travel and meets the strategic outcome goal of reducing the total number of transportation-related deaths.

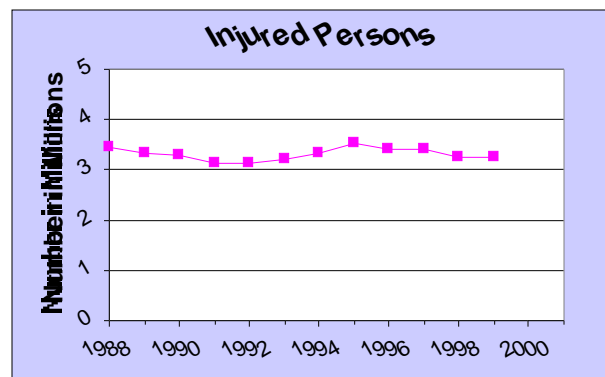
Economic prosperity and the way we live fuels growth in passenger-miles-traveled. As the U.S. population consumes more transportation, the only way to avoid more fatalities is to lower the *rate* of fatalities. Deaths per 100 million passenger miles have shown a downward trend from 1996 through 1998, following a relatively constant level from 1992 to 1995. Again, this aggregate measure is significantly influenced by the highway fatality rate. The continued decrease in 1998 meets the strategic outcome goal of reducing the rate of transportation-related fatalities, measured against passenger-miles. Achieving further reductions in fatality rates will require changes in personal behavior (such as seatbelt use, reduction in alcohol-related crashes, or consumer choice of the safest modes of transportation) and improved transportation technologies.



The rate of fatalities per ton-mile of freight has followed a similar pattern and decreased slightly in 1998, after having remained level for several years. While its significance is still uncertain, this decrease in 1998 also meets the strategic outcome goal of reducing the rate of transportation-related fatalities, in this instance measured per ton-miles.

Injuries:

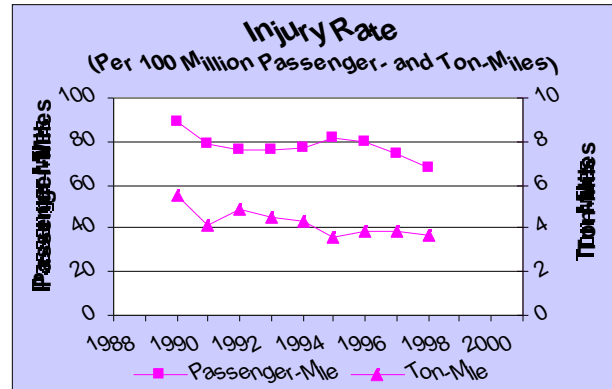
While fatality measures tend to receive more public attention, transportation injuries are a significant burden on individuals and on our society as well. Although injuries rank below fatalities in severity, they extract a cost from our society in hospitalization and medical costs, lost productivity, to say nothing of pain and suffering. Like fatalities, this trend is dominated by trends in highway crashes, which account for 99% of the transportation-related injuries and have an estimated cost of \$150 billion annually. Over the last eleven years, the number of injured people appears to have peaked in 1995, followed by a decrease for the last several years. Although the number of injured persons remained virtually the same from 1998 to 1999 (based on preliminary data), the overall trend since 1995 meets



the strategic outcome goal of reducing the number of transportation-related injuries. Again, this was a particular challenge given the fairly steady rise in travel.

Also like the transportation fatality rate, the injury rate per 100 million passenger-miles has been declining for the last several years, after a peak in 1995. This continued downward trend in 1998 meets the strategic outcome goal of reducing the rate of transportation-related injuries, as measured against passenger-miles.

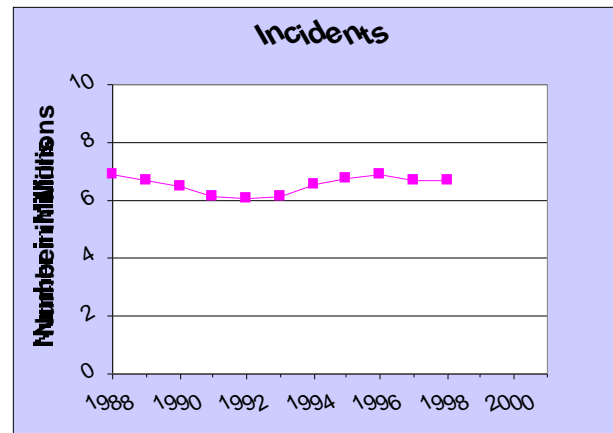
The rate of transportation injuries per 100 million ton-miles of freight has been generally downward in the last decade, which also meets the strategic outcome goal of reducing the rate of transportation-related injuries, in this instance measured against ton-miles.



Transportation Incidents:

Transportation incidents (crashes, system failures, spills, releases, etc.) are precursors to injuries and fatalities, and have an economic cost independent of the human cost. As such, they provide another key indicator for managers. Reducing the number and rate of crashes is generally considered to be the most beneficial intervention to reduce fatalities and injuries.

The trend in transportation incidents has been relatively level for the last two years, after a period of climbing numbers of incidents since 1992. Although not apparent in the graph, the number of incidents experienced a slight decrease (1000 incidents) from 1997 to 1998, which corresponds to the strategic goal of reducing the number of reportable transportation incidents. The significance of this one-year reduction should be viewed with caution, however.



PERFORMANCE PROGRESS REPORT: SAFETY

SAFETY	1993	1994	1995	1996	1997	1998	1999	1999 GOAL	GOAL MET?	GOOD TREND?
Highway Fatalities/100 million VMT	1.7	1.7	1.7	1.7	1.6	1.6	1.5	1.6	✓	
Highway Injuries/100 million VMT	137	139	143	141	133	122	119	127	✓	
% highway fatalities alcohol-related	43.5	40.7	41.2	40.9	38.6	38	38	36		✓
% front occupants using seat belt	66	67	68	68	69	70	67	80		
U. S. commercial fatal aviation accidents/ 100,000 flight hours	.033	.044	.031	.037	.055	.006	.040	.034		
Runway incursions	186	200	240	274	318	325	322	270		
Operational errors/100,000 activities	0.51	0.54	0.52	0.51	0.48	0.55	0.57	0.49		
Deviations/100,000 activities	0.11	0.11	0.10	0.10	0.12	0.18	0.18	0.09		
Recreational boating fatalities	848	831	888	770	857	864	773	763		✓
% mariners rescued that are reported in life-threatening danger	92	96	94	93	93	94	95	93	✓	
Fatalities/100,000 workers aboard commercial vessels	59	31	37	38	39	35	28	34	✓	
Train accidents/million train-miles	4.25	3.82	3.67	3.64	3.54	3.77	3.79	3.44		
Rail-related fatalities/million train- miles	2.08	1.87	1.71	1.55	1.57	1.48	1.30	1.57	✓	
Grade crossing accidents divided by the product of million train-miles and trillion VMT	3.47	3.22	2.87	2.57	2.27	1.98	2.00	2.19	✓	
Rail-related trespasser fatalities divided by product of MTM and billion U.S. population	3.30	3.10	2.80	2.64	2.94	2.80	2.46	2.58	✓	
Transit fatalities/100 million PMT	.610	.670	.567	.523	.545	.565	.531	.507		✓
Transit injured persons/100 million PMT	129	135	133	127	118	119	112	123	✓	
Natural gas transmission pipeline failures	5,378	4,933	4,767	4,964	4,871	4,160	3,754	4,528	✓	
Failures of hazardous liquid pipelines	230	244	188	195	175	154	159	171	✓	
Pipeline incidents caused by outside force damage	168	158	146	150	129	162	117	137	✓	
Serious hazardous material incidents in transportation	358	427	408	466	422	432	341	430	✓	

N/A= Not Available

HIGHWAY FATALITY AND INJURY RATES: In 1999, motor vehicle crashes killed 41,345 (preliminary estimate) Americans and injured over 3 million, taking a heavy toll on American families and costing more than \$165 billion in medical and other costs. Highway crashes cause 94 percent of all transportation-related fatalities and 99 percent of transportation injuries. They are the leading cause of death for people ages 5 through 29.

Performance Goals & Results

Performance Measure: Fatalities per 100 million vehicle miles of travel.

Goals:	1999	2000	2001
	1.6	1.5	1.5**
Actual:	1.5 *		

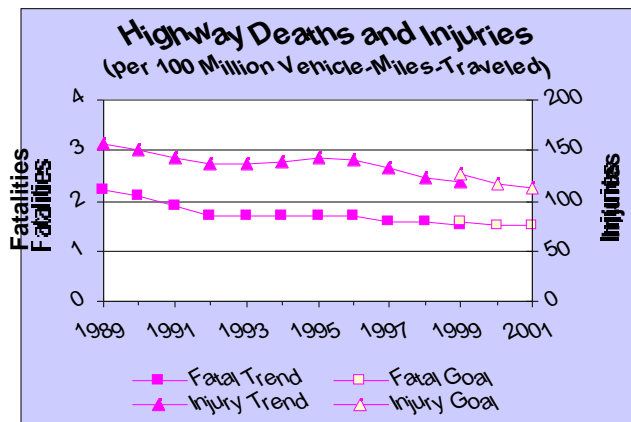
Performance Measure: Injured persons per 100 million vehicle miles of travel.

Goals:	1999	2000	2001	127
Actual:	119*			

* 1999 Preliminary estimates

** This goal may be revised downward in the Revised Final Plan if the final 1999 data confirms the preliminary data.

External Factors: Vehicle travel is expected to grow at approximately 2.2 percent per year. In addition, the highest risk population groups -- older drivers and drivers ages 15 to 24 -- will grow at faster rates than the overall population. The number of younger drivers age 15 to 24 grew by 1.6 percent in 1999, nearly twice as fast as the total population. Although the number of people 70 years and older makes up 9 percent of the total U.S. resident population, they comprised an estimated 11 percent of all traffic fatalities in 1999.



1999 Results: Both the highway fatality and injury rate goals for CY 1999 were met. Fatalities and injuries per 100 million VMT declined to record lows.

This reduction in the fatality and injury rates occurred despite the fact that the economy expanded in 1999, continuing the longest economic expansion in a generation. Historically, economic expansions correlate with short-term increases in fatalities. Exposure factors

that increase in an expanding economy include driving for entertainment purposes as well as for work.

The number of fatalities in 1999 decreased slightly (0.3 percent). However, despite the overall decline in the number of fatalities, motorcycle fatalities increased 11 percent.

In 1999, nine agencies within the U.S. Department of Transportation combined the best injury prevention practices into the Safe Communities approach to serve as a model throughout the nation. Communities are in the best position to improve motor vehicle safety. When a community takes ownership of an issue - traffic safety or otherwise - change happens. DOT surpassed its 1999 goal of 600 Safe Communities with 730 Safe Community sites by the end of 1999.

NHTSA issued a supplemental notice of proposed rulemaking to improve the safety benefits of air bags while reducing the associated risks. This proposal continues a comprehensive set of actions NHTSA announced in 1996, including the use of advanced air bags, to improve automatic crash protection for occupants of various sizes, belted and unbelted, and to minimize the risks posed by air bags to infants, children and other occupants.

Major evaluations completed in 1999:

Evaluation of Federal Motor Vehicle Safety Standard (FMVSS) 214 - Side Impact Protection: Dynamic Performance Requirement

This study found a statistical correlation between the performance measurement for side impact, the thoracic trauma index as measured on an anthropomorphic dummy, TTI (D), and real world performance of crash-involved vehicles. Design changes to comply with FMVSS214 are providing real benefits to occupants of passenger vehicles in side impact crashes.

Effectiveness of Lap/Shoulder Belts in the Back Outboard Seating Positions

This study found that lap/shoulder belts reduce fatality risk by 44 percent relative to unrestrained back-seat occupants of passenger cars, and by 15 percent relative to lap-belted occupants. Lap/shoulder belts also reduce abdominal injuries by 52 percent and head injuries by 47 percent relative to lap belts in frontal crashes.

FY 2000 Performance Plan Evaluation: Based on program performance in FY 1999, we expect to achieve the goals set in the FY 2000 performance plan. To address the increase in motorcycle fatalities, NHTSA, in partnership with the Motorcycle Safety Foundation and others in the motorcycling community, will complete the development of the National Agenda for Motorcycle Safety. The Agenda will provide recommendations for NHTSA and its partners on specific ways to improve motorcycle safety.

Strategies and Initiatives to Achieve 2001 Goal: DOT will reduce the rates of fatalities and injuries per 100 million vehicle miles of travel through initiatives aimed at reducing the occurrence and consequences of traffic crashes. NHTSA will continue to focus on reducing the number of alcohol-impaired drivers and increasing seat belt use (see separate goals for each of these). DOT will also continue to make highways safer by improving the safety of the roadway itself, increasing the safety of rail-highway grade crossings, improving the safety of vehicles, developing intelligent vehicle technologies, and encouraging people to shift from highways to safer forms of travel.

- DOT will continue its grant programs for highway safety, and broadly advance its comprehensive research and outreach programs. An increase of \$167 million is requested in these critical areas (\$1.5 billion total obligations).
- NHTSA will focus on preventing crashes through behavioral programs (see goals for seat belt use and reducing alcohol related fatalities), on lessening the severity of crashes by improving vehicles, and on emergency response capabilities – the human, vehicle and environmental factors that influence the crash event - with special emphasis on reducing injuries to children. (\$519 million).
- NHTSA will continue to perform compliance tests to assure conformity with the Federal Motor Vehicle Safety Standards, will investigate potential safety-related defects, and will monitor safety recalls to assure that non-compliant and defective vehicles and equipment are fixed.
- NHTSA will work with all DOT modes to increase the number of Safe/Livable Communities. This approach builds local coalitions to identify and address their traffic injury problem.
- FHWA will lead a Department-wide effort to identify highly effective safety technologies to save lives and reduce injuries and work cooperatively to facilitate their development (\$6 million).
- Regulatory initiatives in FY 2001 will address improved seat standards, improved head restraint standards, fuel system integrity, occupant ejection prevention through improved door locks, and improved roof crush resistance.
- DOT will implement a Human-Centered Systems Research Program to develop technology, methods and systems to mitigate human error and improve operator performance of commercial and non-commercial vehicles, equipment and systems. For FY 2001, this program will focus on research to: (1) detect operator fatigue and enhance alertness, and (2) upgrade operator knowledge, skills and attitudes (\$3.0M). This initiative will contribute to achieving all of the Department's safety performance goals.

Other Federal Programs with Common Outcomes:

All Federal agencies are involved in the President's initiative to increase seat belt usage. NHTSA and HHS work together on several public health issues such as drinking and driving, child safety, and emergency medical services. DOT and the National Transportation Safety Board (NTSB) each strive to understand the causes of transportation incidents and try to reduce the number of fatalities and injured persons.

ALCOHOL-RELATED HIGHWAY FATALITIES: About 3 in every 10 Americans will be in an alcohol-related crash at some time in their lives. Alcohol-related fatalities account for almost 40% of all highway fatalities. While down from 25,000 in 1982, 15,794 people died in alcohol-related motor vehicle crashes in 1999. Alcohol is the single biggest cause of fatal crashes. The Department and its partners have a goal of reducing alcohol-related fatalities to no more than 11,000 by 2005.

Performance Goals & Result

Performance Measure: Percentage of highway fatalities that are alcohol-related.

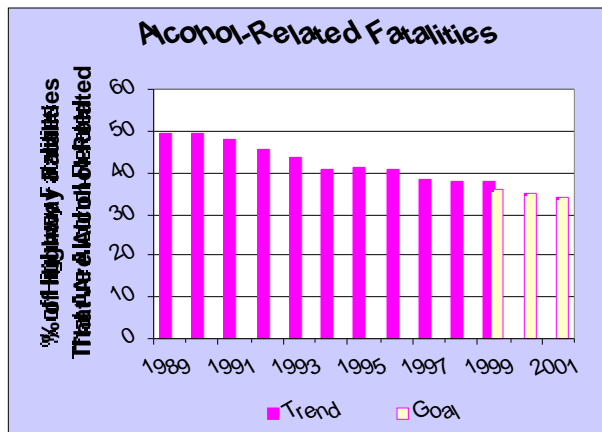
Goals:	1999	2000	2001
	36%	35%	34%

Actual: 38% *

* 1999 Preliminary Estimate

External Factors: The magnitude of the drinking-and-driving problem is demonstrated by 27.4% of college students reporting that they drink and drive. There is also growing evidence that the use of drugs (a corollary problem) by young people is rising. Travel, population, and employment changes have a large influence on traffic fatalities generally and on alcohol-related traffic fatalities in particular. If these factors increase rapidly in states, statistical models show that influencing the alcohol-related fatality rate is more difficult.

1999 Results: Based on preliminary data, it appears that



the 1999 goal to reduce the percentage of highway fatalities that are alcohol-related to 36% was not met. In 1999, 15,794 people died in alcohol-related crashes (38 percent of the total fatalities for the year), a 30 percent reduction from the 23,626 alcohol-related fatalities in 1988 (50 percent of the fatalities). Alcohol consumption among 16 to 20 year olds has increased every year since 1993. However, the percentage of alcohol involvement among drivers in this age group killed in crashes declined slightly in 1999 as it did throughout the 1990s.

In 1999, DOT worked with other federal agencies, states, and other organizations to reach this goal. TEA-21 created a new grant program (Section 163) focused on

reducing the incidence of alcohol-impaired drivers by authorizing \$500 million over 6 years for incentive grants to states that enact and enforce laws that make it illegal to operate a motor vehicle with a blood alcohol concentration (BAC) of 0.08 percent or greater.

TEA-21 also authorized \$219.5 million over 6 years to continue the Section 410 alcohol-impaired driving countermeasures incentive grant program. To qualify for this grant, states must either demonstrate that they have in place certain laws or programs, such as administrative license revocation laws and graduated licensing programs, or meet certain performance criteria based on their alcohol-related fatality rates. States use Section 410 grant funds to implement and enforce alcohol-impaired driving countermeasures.

NHTSA published evaluations, distributed them to states, localities, and partners, and encouraged them to adopt similar programs where appropriate.

Selected Evaluations completed in 1999:

Evaluation of a Day Reporting Center for Repeat DWI Offenders

This project examined the effectiveness of a Day Reporting Center in Maricopa County, Arizona in reducing the DWI recidivism rate of repeat DWI offenders. Although the DRC program was no more effective in reducing recidivism than was a comparison standard probation program, it was more cost-effective and helped reduce pressure on the county jail system.

The Relationship of Alcohol Safety Laws to Drinking Drivers in Fatal Crashes

This study analyzed the relationships between the passage of alcohol safety laws and the proportion of drinking drivers in fatal crashes. The study compared three major alcohol safety laws (administrative license revocation laws, .10 BAC per se, and .08 BAC per se) in terms of the proportion of drinking drivers in fatal crashes. The results indicate each of the three laws had a significant relationship to the downward trend in alcohol-related fatal crashes in the United States over that period. The report points out that this long-term trend is not the product of a single law, but the result of the growing impact of several laws over time plus the effect of other factors (e.g., sobriety checkpoints, media attention).

FY 2000 Performance Plan Evaluation: Although the 1999 goal was not met, we expect to achieve the goal set in the FY 2000 performance plan. NHTSA plans to implement the following strategies to reach the 2000 goal: (1) conduct a new national public information and education campaign, "You Drink and Drive. You Lose," (2) conduct two high visibility enforcement mobilizations, and (3) focus on five states with high alcohol-related fatality rates (Georgia, Louisiana, Pennsylvania, Tennessee, and Texas) that have agreed to increased enforcement efforts combined with the "You Drink and Drive. You Lose." Campaign.

Strategies and Initiatives to Achieve 2001 Goal: DOT will develop and implement countermeasures designed to reach high-risk drinking drivers and focused on youth and young adults. DOT will work with state and local partners to test new programs to stop repeat offenders and convey the "don't drink and drive" message to the highest risk populations.

- In 2001, NHTSA's impaired driving countermeasures operations and research programs (\$11.2 million) will focus on reducing alcohol and drug use associated with driving. Programs include ongoing efforts in:
 - public information and education activities to develop and test new materials and methods for communicating with the public;
 - outreach to public and private organizations, employers, legal professionals, and youth groups to establish cooperative programs that use their influence to reduce drinking and driving; and
 - increasing enforcement of impaired driving laws and swift and sure penalties in the states.
- The programs will continue to focus on drinking and driving by high-risk groups, including 21 to 34 year olds, repeat offenders with high BAC, and youthful drivers. The initiative will develop new strategies and interventions to reach these groups.
- TEA-21 provides three new and one revised grant programs focusing on reducing the incidence of alcohol-impaired driving. In FY 2001 \$90 million is available to States that enact and enforce .08 BAC laws; an additional \$36 million is available to combat alcohol-impaired driving. States also may benefit from countermeasures to support open container laws and repeat offender laws.

Other Federal Programs with Common Outcomes: NHTSA works with Department of Health and Human Services (HHS), the Office of National Drug Control Policy, and the Justice Department to curb the use of

alcohol and illegal drugs by minors and reduce the incidence of drinking and driving crashes. NTSB investigates significant crashes and helps provide information on causes and potential solutions.

SEAT BELT USE: Over 30 percent of Americans don't use a seat belt when driving or riding in motor vehicles. Seat belts save an estimated 9,500 lives each year. If seat belt use nationwide were to increase to 90 percent, approximately 5,500 deaths and 132,600 injuries could be avoided, and \$8.8 billion saved annually.

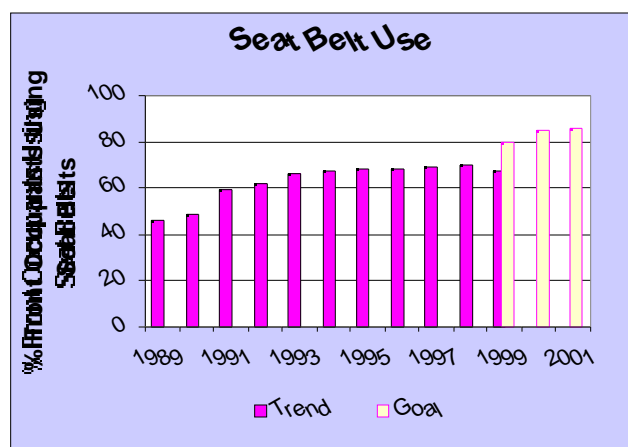
Performance Goals & Result

Performance Measure: Percentage of front occupants using seat belts.

Goals:	1999	2000	2001
	80%	85%	86%
Actual:	67%*		

* 1999 Preliminary estimates

External Factors: As vehicle travel increases, so does the exposure of people to motor vehicle crashes. Beginning in 1991 and increasingly every year thereafter, DOT and its partners succeeded in convincing the majority of the population to buckle up. However, the behavior of the remaining part-time seat belt users and non-users will be more difficult to change.



percent, below the 1999 goal. Based on preliminary estimates, seat belt use declined slightly between 1998 and 1999. However, this decline is not statistically significant and may be attributable to a change in the methodology for collecting data or normal sample variations, rather than a real decline in seat belt usage.

The 1998 data is from a NHTSA-conducted probability-based sample of national use rates, the National Occupant Protection Use Survey (NOPUS). In 1999, the agency conducted a smaller scale version of NOPUS due to cost considerations. Because of technical differences between these survey instruments and normal sampling variations, the 67 percent use rate is not statistically different from the belt use rate of 70 percent. Historically, NHTSA calculated a weighted national rate using the most recent belt use surveys in each state, adjusted by the state's proportion of the U.S. population. Preliminary 1999 state survey data shows a rate of 70

percent. However, it is clear that belt use did not increase from 1998 to 1999.

By the end of 1999, 16 states plus Puerto Rico, Washington, D.C., American Samoa, Guam, Marianas, and the Virgin Islands had enacted primary belt laws. An additional 33 states have secondary belt laws.

In 1999, NHTSA published a final rule establishing a new standard requiring manufacturers to provide motor vehicles with child restraint anchorage systems that are standardized and independent of vehicle seat belts. The agency also urged automakers to develop side airbag test procedures, using both child and adult dummies in a wide variety of positions, to avoid risking serious injury during airbag deployment.

Selected Evaluations completed in 1999:

National Child Safety Seat Distribution Program Evaluation

This study examined how \$8 million worth of child safety seats, provided by General Motors, were distributed to families who could not otherwise obtain a child safety seat for their children. Medical facilities and community health centers were the most likely distribution programs that had prior experience and trained staff to assure that the seats were properly installed in recipients' vehicles.

Occupant Protection Special Traffic Enforcement Program Evaluation

This study examined 20 states that received grants to conduct special traffic enforcement programs to increase seat belt usage in their states. Over one-quarter of a million seat belt citations and close to one million other citations were issued. Over 300,000 public information and education items were aired, printed, or distributed to educate the public about the importance of buckling up and that their local police would give them a citation if they were not. Belt use increased an average of 5.6 percentage points in secondary law enforcement states compared to 16.8 percentage points for primary law enforcement states.

FY 2000 Performance Plan Evaluation: NHTSA remains committed to the national seat belt use goals of 85 percent by 2000 and 90 percent by 2005. However, since the 1999 goal was missed by a significant amount, meeting these goals will require rethinking our strategy. NHTSA plans to implement a two-pronged approach to

reach the 2000 goal: (1) expand the scope of the Buckle Up America (BUA) Campaign in all 50 States; and (2) focus on several specific opportunities for increasing belt use, e.g., States likely to pass primary enforcement of seat belt use laws. The success of these initiatives will be evaluated in September to determine if further adjustments need to be made in FY 2001.

Strategies and Initiatives to Achieve 2001 Goal:

Achieving the Department's seat belt goal of 86 percent front occupant usage will require focused attention on those groups who are the most likely not to use seat belts or to use them only occasionally, e.g., African Americans, Hispanics (particularly youths in both groups), and people with low incomes. In 2001, NHTSA will work with states and communities to target information and education campaigns to these groups and to make the benefits of primary seat belt laws clear.

- The Occupant Protection program (\$11.4 million), will focus on expanding public information, education, and outreach targeted to African Americans, Hispanics, and low income populations.
- An additional \$18.7 million in funding has been included in the NHTSA 2001 budget to expand the use of partnerships, promotions, and educational materials for diverse audiences and youth. Grants will be used for high visibility enforcement activity and for promoting seat belt use by national organizations with diverse memberships and national organizations that work specifically with teenage youth including the National Organization of Black Law Enforcement Executives, the National Black Caucus of State Legislators, the National Latino Children's Institute, and ASPIRA, an Hispanic organization that focuses on youth.
- Several regulatory initiatives will be pursued to reduce the number of infants and children killed in traffic-related crashes.
- NHTSA will conduct semiannual "National America Buckles Up Children" mobilizations; implement the recommendations from the Blue Ribbon Panel II – Protecting Our Older Child Passengers; expand the automobile/child safety seat compatibility database for consumers; expand the child passenger safety program to include teens and young adults; and implement a full education and awareness program to educate the public on the new Lower Anchors and Tethers for Children (LATCH).

Other Federal Programs with Common Outcomes:

The President established government-wide initiatives to increase seat belt use among Federal employees and users of Federal facilities. These initiatives also focus on

assuring that children and infants are buckled up in child safety seats in the back seat for every trip to reduce child fatalities and injuries. NHTSA works with the Department of Health and Human Services through the Healthy People 2000/2010 initiatives to promote seat belt and child safety seat use.

LARGE TRUCK-RELATED FATALITIES AND INJURIES: In 1999, 5,203 Americans died and 127,000 were injured in traffic crashes involving large trucks. Large trucks are over-represented in fatal crashes. Of all people killed in motor vehicle incidents, 13 percent died in crashes involving a large truck. Yet trucks represent only 3 percent of registered vehicles and about 7 percent of the vehicle miles of travel. While these numbers are unacceptably high, the fatal crash rate is the lowest it has been in decades. Fatality rates for large truck crashes dropped 33 percent and injury rates decreased 30 percent from 1988 to 1998. These rates declined even as the population of motor carriers doubled over the last decade. To focus attention on commercial vehicle safety, Secretary Slater set Departmental goals in 1999 to reduce large truck-related fatalities 50 percent by the end of 2009 and injured persons 20 percent by the end of 2008.

Performance Goals and Results

Performance Measure: Number of fatalities involving large trucks

Goals:	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2009</u>
	N/A	4,934	4,830	2,687

Actual: 5,203*

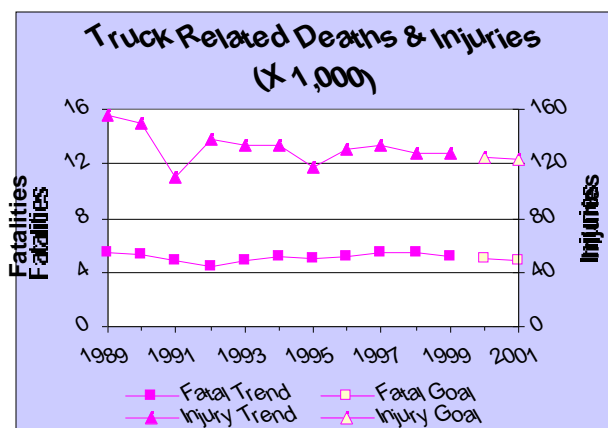
Performance Measure: Number of injured persons involving large trucks

Goals:	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2008</u>
	N/A	125,000	122,000	102,000

Actual: 127,000*

* 1999 preliminary estimates

External Factors: Driver error due to inattention and drowsiness are major contributing factors to large truck-related traffic crashes. Deficiencies in the available crash data and knowledge about the causes of a crash limit the design and implementation of effective strategies. Federal and state agencies are able to monitor compliance and enforce federal safety regulations in only a small portion of the motor carrier industry.



1999 Results: There were no goals for large trucks in the DOT FY 1999 Performance Plan. However, the Federal Motor Carrier Safety Administration 1999 goals of reducing fatalities to 4,988 and injuries to 126,000 were not achieved. The preliminary 1999 estimates indicate fatalities were 5,203 and injuries

127,000. Fatalities have decreased 3 percent from the 1998 total of 5,374. Injuries have remained constant from the 1998 total of 127,000. In addition to the promising decline in fatalities, large truck-related fatalities and injuries per million truck miles traveled continued to decline.

The FMCSA is targeting high-risk motor carriers for safety improvement. In 1999, the agency increased the number of compliance reviews for this target group. Overall, the number of Federal compliance reviews conducted doubled between the first and fourth quarters and the total for the year increased 28% over 1998. Also, the number of enforcement cases processed each quarter increased. The average claim amount per case increased and the backlog of enforcement cases were nearly eliminated.

The agency's ability to identify high-risk carriers is based on complete, accurate and timely information. FMCSA is working with the states to improve the timeliness of reporting the results of roadside inspections, compliance reviews, and crashes. The total number of states participating in the Performance Registration and Information Systems Management (PRISM) program increased by five during 1999. PRISM links State vehicle registration with the motor carrier's safety fitness information.

FY 2000 Performance Plan Evaluation: We expect to achieve the goals set in the FY 2000 performance plan. In FY 2000, there is a continued emphasis on increased inspections and compliance reviews, stronger enforcement measures, expedited rulemaking actions, enhanced research, and improvements to the commercial driver's license program. The agency is expanding its research programs, and increasing its effort to test and deploy technologies in the commercial vehicle operations/ITS platform and the intelligent vehicle initiative, in order to improve driver and vehicle performance in future years. A moderate decline in fatalities and injuries is expected in the next three years, followed by a more progressive reduction in subsequent years.

Strategies and Initiatives to Achieve 2001 Goal: The FMCSA will further enhance program effectiveness by: (1) improving enforcement and using better targeting of high-risk carriers and commercial motor vehicle drivers; (2) improving the timeliness of the issuance of vehicle equipment and operating standards; (3) improving safety information and commercial motor vehicle technologies; and (4) increasing the safety awareness of the driving public and the motor carrier industry.

- In 2001, the National Motor Carrier Safety Program (\$177M, 69 percent above 2000) will support a broad range of comprehensive commercial vehicle safety programs in each State (\$155M, 48 percent above 2000) and provide for improved information systems and analysis (\$22M, more than double the 2000 level). Programs integrate federal and state activities through a performance-based approach to commercial vehicle safety nationwide, improve driver and vehicle inspections, traffic enforcement, safety performance data collection, analysis and reporting.
- Additional funds for general operating expenses (\$92.2M) will be used to hire enforcement staff to support safety programs and establish the new administration. In addition, the FMCSA will continue to expand its research and technology program (\$9.5M). Key research and technology projects that will begin or continue are: crash risk analysis; a study of the relationship between driver methods of pay and safety; the development of a SAFESTAT algorithm for motor coaches; and technology development and testing for driver alertness monitoring.
- Under the Commercial Driver's License Pilot Program, an additional \$10M in dedicated funding will be available to states to enhance driver record information systems. These systems speed entry of convictions onto driving records, improve information exchange between states, and ensure that driver records are complete and contain all driving convictions. The result of these improvements will allow judges and licensing agencies to better identify potential problem drivers.
- FMCSA will also support the deployment of Commercial Vehicle Information Systems and Networks (CVISN) through the use of open standards and communications infrastructure.

- NHTSA will evaluate electronic braking systems to enhance braking capabilities of large trucks and the benefits of adding traction control to ABS systems.

Management Challenge – Large Truck Safety

The number of large truck-related crashes and fatalities have remained steady or climbed slightly in recent years. This stubborn and tragic trend has made large truck safety a top priority of the Secretary and the FMCSA. With truck transportation the backbone of our economy, the management challenge facing DOT is to implement a risk based, systems approach that gets unsafe trucks and operators off our highways while not unduly burdening safe and conscientious operators.

To judge their progress in meeting this management challenge, FMCSA has set specific near term goals. Several key objectives are:

- Deploy Commercial Vehicle Information Systems and Networks (CVISN) technology in 26 states by September 2003.
- Limit negotiated settlement costs to extraordinary situations only, so that violators of safety regulations will not view penalties as a cost of doing business.
- Improve the efficiency of roadside inspections through technology. Specifically, a brake testing device will be pilot tested by January 2001.

Other Federal Programs with Common Outcomes: FMCSA is funding work with NHTSA and states to develop a database of truck and bus crash data, and is collaborating with the TRB and the NHTSA to study large truck crash causation. FMCSA is also funding and managing a research program to examine the use of technological aids for driver fatigue management, which involves the Department of Defense and the commercial motor carrier industry.

AIR CARRIER FATAL ACCIDENT RATE: Commercial aviation is one of the safest forms of transportation. But when passengers board an airplane, they give up personal control and face an unfamiliar risk. While fairly rare, aviation accidents can have catastrophic consequences, with large loss of life. The public demands a high standard of safety, and expects continued improvement. In 1997, the White House Commission on Aviation Safety and Security established a goal of reducing the fatal accident rate for U.S. commercial air carriers by 80 percent by 2007.

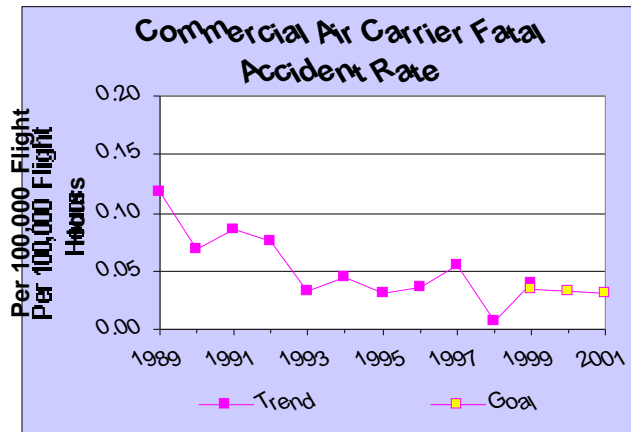
Performance Goal & Result

Performance Measure: Fatal aviation accidents (U.S. commercial air carriers) per 100,000 flight hours.

Goals:	1999	2000	2001
	.034	.033	.031
Actual:	.040*		

* 1999 preliminary data

External Factors: In absolute terms, the fatal accident rate in commercial aviation is very low. One of the primary reasons for this is the use of jet aircraft. Since the introduction of jet transports into commercial aviation in the late 1950's, they have proven to be safer and more reliable than propeller driven aircraft. The expanded use of small jet aircraft in the scheduled regional segment of the industry appears to be contributing to the marked safety improvements in that segment, as well. Technological and procedural improvements have also contributed to a lower accident rate.



1999 Results: Based on preliminary data, the air carrier fatal accident rate for Calendar Year 1999 was .040 per 100,000 flight hours, missing the goal of .034 by .006. There were two major-carrier fatal accidents, one of which involved passengers. Of the five commuter fatal accidents, two involved passengers. Four of them occurred in Alaska, one of which involved passengers on-board. The seven air carrier fatal accidents resulted in 24 fatalities.

To achieve the long-range goal set by the White House Commission, the FAA and its partners need to focus

their efforts on those causal factors that contribute to the majority of fatal accidents. FAA's "Safer Skies" effort in the commercial aviation area includes the following six accident categories: controlled flight into terrain, loss of control, uncontained engine failure, runway incursion, approaches and landings, and weather. While having little immediate impact on fatal accident rates year-to-year, identifying and implementing corrective actions in these areas will positively impact the fatal accident rate in the future. In 1999, under the Safer Skies Agenda, FAA and its partners completed selection and prioritization, and began implementation of high pay-off interventions for the areas of uncontained engine failure and controlled flight into terrain. Causal analysis for approach and landing were completed and recommended strategies for interventions submitted for review by the joint government-private sector team. All initiatives relating to cabin safety were completed as planned.

FAA has also completed work on revising guidance (including rules and advisory circulars) in such areas as fuel tank safety, aging aircraft non-structural systems, aircraft performance and handling in icing conditions, terrain awareness and warning system, aircraft powerplant, crashworthiness, and structures.

In the area of industry oversight, continued refinements have been made in both inspection resources targeting and automated systems designed to support aviation safety oversight of operators.

FY 2000 Performance Plan Evaluation: The trend in commercial aviation safety remains on target for the FY 2000 goal, however variance in year-to-year results should be expected because the occurrence of fatal air carrier accidents is so rare.

Strategies and Initiatives to Achieve 2001 Goal: FAA will work with the aviation community and other governmental agencies to identify causal factors of accidents, and intervene accordingly to prevent potential causes of future accidents.

- FAA's "Safer Skies" effort with the aviation industry in FY 2001 will feature implementation and further identification of selected interventions in controlled flight into terrain and uncontained engine failure. Causal analysis will begin for weather related accidents; recommended interventions will

be identified for loss of control accidents; and detailed implementation plans will be completed for approach and landing accidents and runway incursions. For 2001, FAA targets a 20 percent reduction in fatal accidents in the 6 areas of the "Safer Skies" initiative, which will be the key factor in reducing overall fatal accident rate.

- FAA's regulation and certification program establishes aviation safety standards, monitors safety performance, conducts aviation safety education and research, issues and maintains aviation certificates and licenses, and manages rulemaking. (\$692 million)
- FAA's aviation medicine research program works to enhance cabin safety factors and is developing guidelines based on accident research, toxicological findings, and analyses of information from the aeromedical consolidated database to help prevent aircraft accidents, injuries, and death. (\$5 million)
- FAA's research in safety technology supports the regulatory program, which sets safety standards for aircraft design and maintenance. Areas studied include fire-resistant materials for cabin interiors, fire detection equipment, inspection and maintenance of aging aircraft, and prevention of engine failures. (\$49 million)

Management Challenge – Aviation Safety

FAA faces many challenges in promoting aviation safety in a dynamic industry. To judge its progress in promoting aviation safety in this dynamic environment, DOT has set these goals:

- Initiate DOT/FAA oversight of U.S. carriers' safety audits of their foreign code-share partners in FY 2000. In each calendar quarter beginning 60 days after announcement of DOT's guidelines, 25% of existing code-share partners will be audited by the U.S. carriers.
- In FY 2000, implement legislation stiffening penalties for trafficking in suspected unapproved parts.
- In FY 2000, finalize the Flight Operational Quality Assurance (FOQA) rule.
- In FY 2000, finalize the rule on air tour operators.
- To help improve runway safety, in FY 2001 the first Airport Movement Area Safety System (AMASS) will be operational (34 airports will have operational AMASS systems by CY 2002).
- In FY 2001, develop an enhanced Air Transportation Oversight System (ATOS)

reporting module and provide Internet and Intranet access to each ATOS inspector to facilitate remote input of inspections data.

- In FY 2001, provide in-depth ATOS training to the entire safety inspector work force.

Other Federal Programs with Common Outcomes:

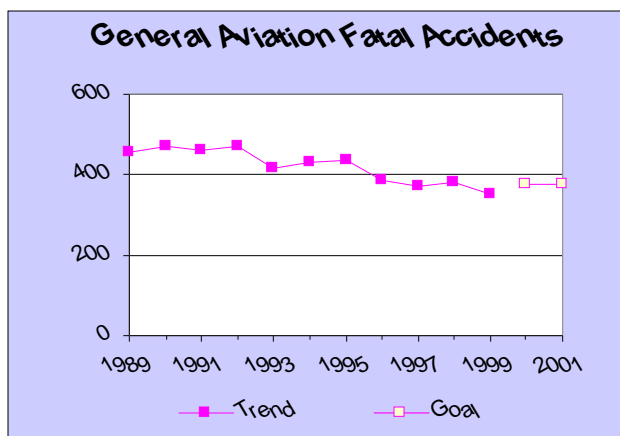
Building upon the July 1999 Memorandum of Understanding between the FAA and NASA, both agencies are in the process of finalizing the FAA/NASA Integrated Research Plan. The purpose of this plan is to effectively leverage FAA and NASA safety research and development resources to achieve their common goal of a five-fold fatal aviation accident reduction. The plan specifies how the two agencies will:

- Articulate common goals tying research programs to "real world" outcomes in focus areas, e.g., accident prevention, precursor identification, mitigation and safety risk analysis.
- Consolidate all aviation safety research through analysis of: investment contributions to each focus area by FAA and NASA individually and jointly; investment allocations for commercial and general aviation applications; level of coordination based on shared investment with a view toward combined investment over time; and periodic program review.
- Improve coordination and communication between the agencies outlining the information needs of each agency and specifying organizational points of contact.
- Establish an investment strategy, which coordinates assessments of goal accomplishments and investment plans; synchronizes communication based on budget cycles; and integrates planning and implementation actions.

GENERAL AVIATION FATAL ACCIDENTS: Aviation accidents overall have caused about 1,000 deaths a year in recent years, with the majority of these in General Aviation (GA), which for the purpose of this performance goal includes On-Demand Air Taxi. These public, private and corporate aircraft provide a wide range of services – like crop dusting, fire fighting, law enforcement, news coverage, sightseeing, industrial work, and corporate transportation – in addition to personal and recreational flying. GA is an important element of the U.S. transportation system and the U.S. economy.

Performance Goal & Result			
Performance Measure: Number of fatal general aviation accidents.			
Goals:	1999	2000	2001
	N/A	379	379
Actual:	354		

External Factors: General aviation comprises a diverse set of aviation activities and includes all segments of the aviation industry except commercial air carriers and the military. The activities conducted are extensive and varied, including student training, business and corporate travel, air shows, aircraft and component manufacturing and maintenance, personal and recreational flying, and the host of businesses, technologies, research, airports and services that support flight operation. Aircraft range from single-seat homebuilt aircraft, rotorcraft, and balloons to highly sophisticated extended-range turbojets. Some elements of general aviation operate in hazardous environments, such as agricultural application, external-load operations, fire fighting and power line patrol. The level of risk is inherently higher for these elements.



in 1998. Since 1988, there has been a gradual trend downward in the number of general aviation accidents although on a year-to-year basis, progress has not been smooth.

Major recent interventions, which we believe are having a positive effect on the current fatal accident decline in general aviation, include:

- Development of a number of products in the FAA's Aviation Safety Program, e.g., decision-making training aids, personal minimums checklist video and CD-ROM, water survival video, and a GA pilot education program with the Aircraft Owners and Pilots Association (AOPA) Air Safety Foundation and General Aviation Manufacturers Association (GAMA) on runway incursion.
- FAA's Aviation Safety Program has also launched an educational campaign to increase the use and installation of seat belts/shoulder harnesses in GA aircraft.
- Over the past five years, the AOPA Air Safety Foundation has conducted over 1,200 safety seminars, disseminating critical safety information through these seminars and on its web site. It has distributed hundreds of thousands of safety advisories on the topics of weather and decision making.
- FAA published Advisory Circular, 23.1309-C, *Equipment, Systems, and Installations in Part 23 Airplanes*, and 23.1311-1A, *Installation of Electronic Display in Part 23 Airplanes*. These advisory circulars will allow for more realistic reliability standards for general aviation airplanes and will also allow for new, less expensive avionics to be installed in the general aviation fleet. This will help to reduce the "loss of situational awareness" and weather accidents.
- The FAA signed agreements with contractors for Flight Information Services Data Link systems. These systems will enable pilots to receive text, graphical weather, and other national airspace information directly into the cockpit display. This unique government and industry partnership will greatly improve information availability for pilots, thereby enhancing flight safety.

FY 2000 Performance Plan Evaluation: Based on 1999 performance and the continuation of ongoing efforts to

reduce general aviation fatalities, we expect to meet the FY 2000 performance goal.

The annual performance goal is developed by the GA community and the FAA; it is not only an FAA goal. The goal takes into consideration a projected 1.6% per year increase in activity in this sector. With this increase in activity, the number of GA accidents is also projected to increase if there are no further interventions. The targets set for 2000 and 2001, while higher than the 1999 actual, are based on a 3 and a 4 percent reduction from the forecast number of accidents for these fiscal years, i.e., those accidents that would occur if nothing further was done to prevent them.

We are now beginning to realize the benefits of past efforts undertaken by the General Aviation community and the FAA. If those benefits are sustained, they may help the General Aviation community reduce the projected increase in fatal accidents. It is too soon to be certain that these short-term benefits will be sustained in the future or what the full impact of those benefits will be. The General Aviation Joint Steering Committee, with FAA and GA community membership, is analyzing the results of past efforts to identify those that were most effective and to develop a plan for future action.

Strategies and Initiatives to Achieve 2001 Goal:

General aviation is one of the three primary focus areas of the Safer Skies Initiative, announced by the Administrator in 1998. (It should be noted that the Safer Skies General Aviation segment started later than the Commercial segment.) FAA's primary strategy for improving GA safety is working with the General Aviation community to identify problems and implement solutions. The FAA is currently working with the GA Joint Steering Committee to develop a plan for further reducing fatal general aviation accidents. Analysis of accident and incident data for loss of control, survivability, and/or aeronautical decision making, completed in FY 2000, will be used to develop recommended interventions beginning in 2001 for implementation in 2002.

Other Federal Programs with Common Outcomes:

NASA, in partnership with DOT, is conducting research on general aviation safety programs. See page 20 for a more detailed discussion of FAA coordination with NASA on safety research and development.

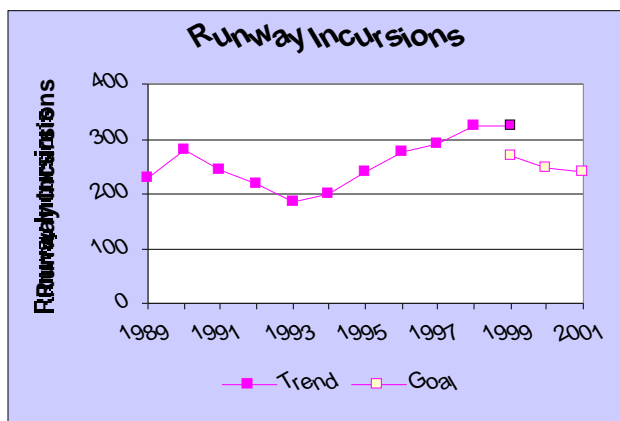
RUNWAY INCURSIONS: Runway incursions create dangerous situations that can lead to serious accidents. A runway incursion occurs when an aircraft, ground vehicle or person occupies or crosses a runway that is in active use for takeoffs or landings. The largest aviation disaster in history (at Tenerife) resulted from a runway incursion. Reducing the number of runway incursions will lessen the probability of accidents that potentially involve fatalities, injuries and significant property damage.

Performance Result & Goal

Performance Measure: Number of runway incursions.

Goals:	1999	2000	2001
	270	248	241
Actual:	322		

External Factors: Growth in airport operations has increased an average of 3.5% per year from 1996 through 1998 and the same rate of increase continued in 1999. With increased operations, the risk of incursions increases. Runway incursions are most likely to occur at complex, high volume airports. These airports typically have multiple parallel or intersecting runways; multiple taxiway and runway intersections; complex traffic patterns; and the need for vehicular and aircraft traffic to cross active runways.



1999 Results: The 1999 runway incursion target was not met. However, it is worth noting that while operations increased, runway incursions did not. In fact, the number of runway incursions actually declined slightly from 325 for 1998 to 322 in 1999 - an overall decrease of .9%. This was the first year runway incursions have not increased since 1993.

The issue of runway incursions is complex and involves performance and human factors issues associated with pilots, controllers, and vehicle operators. While a number of new initiatives were implemented in 1999, most will take several years to show measurable results. As initiatives mature, we expect to see the number of runway incursions decreasing at a faster pace. (Runway incursions have decreased six of the last seven months compared to the previous year.)

The three leading causal factors for runway incursions continue to be pilot/controller communications, lack of familiarity with an airport, and lack of situational awareness.

Pilot/controller communication problems generally result from misunderstood control instructions. In numerous incidents, pilots proceeded onto or crossed an active runway even after acknowledging controller-issued hold short instructions. Pilots are encouraged through mass mailings, aviation articles, and seminars on tower operations, to read back runway hold short instructions verbatim.

Additionally, controllers' ability to hear and confirm proper read-back of hold short instructions is being improved through the use of mandatory computer based instruction courses. Controllers are also mandated to perform monthly refresher training on surface safety related topics.

Pilot lack of familiarity with an airport including airport signage, markings, and lighting; runway exiting procedures; and taxi procedures is another significant factor in runway incursions. In 1999, the Runway Safety Program, in conjunction with the Aircraft Owners and Pilots Association (AOPA), posted digitized airport diagrams on the Internet. Pilots are encouraged to download and review airport/taxi diagrams prior to departing. In addition, standardized Taxi Routes are being implemented at select airports.

A large percentage of runway incursions are also attributed to a lack of situational awareness by controllers, pilots, vehicle operators, and pedestrians. FAA implemented education and training initiatives designed specifically to increase the level of situational awareness of all individuals associated with airport operations. Additionally, the FAA has drafted an Advisory Circular (AC) on standardized cockpit procedures for airport surface operations.

Technological initiatives to improve airport ground operations, such as Airport Movement Area Safety System (AMASS), Global Positioning System (GPS), and Automated Dependent Surveillance Broadcast (ADS-B), are in various stages of development and testing for potential acquisition and implementation.

Implementation of "Now Strategies" (near-term runway incursion reduction initiatives) is on-course with 16 of 18 established initiatives completed. Examples of "Now Strategies" include mandatory monthly air traffic management-airport operator meetings at the top 20 airports and runway incursion prevention training for controllers.

National Runway Incursion Action Team (RIAT) visits were conducted at 20 airports. Regional RIAT's were conducted at seven additional locations.

FY 2000 Performance Plan Evaluation: It is unlikely that the runway incursion goal for FY 2000 will be met despite the fact that reduction of runway incursions represents one of the FAA Administrator's top five initiatives. Actions are being taken to address this issue.

The FAA Administrator has established a higher level of FAA executive oversight and has appointed a Director of Runway Safety. The Director serves as a single focal point for the coordination and integration of the many initiatives to reduce runway incursions within FAA and in partnership with the industry. In addition, the Director ensures timely implementation and execution of runway safety initiatives.

Beginning in March, a series of nationwide initiatives will be implemented. These initiatives include workshops that will be conducted within all nine FAA regions bringing together pilots, airport management, air traffic control personnel, and other aviation interests to develop local and regional initiatives and action plans. These workshops will culminate in a national summit that will be held in Washington, DC in June. The objective of the national summit will be to provide updates on regional initiatives and conduct a symposium that focuses on the human factors elements associated with runway incursions. Regional- and national-level initiatives and plans for FY 2001 will be identified and developed.

In conjunction with these events, we will reach out to the entire pilot community (general aviation and commercial) to promote awareness while increasing training and education initiatives. In addition, training initiatives for air traffic controllers and vehicle operators will be greatly expanded. These activities will be accomplished in partnership with aviation community organizations such as NASA, the Airline Owners and Pilots Association (AOPA), the Airline Pilots Association (ALPA), the National Business Aviation Association (NBAA), the American Association of Airport Executives (AAAE), the Airports Council International (ACI), and others.

Strategies and Initiatives to Achieve 2001 Goal:

During FY 2001, the FAA will implement a number of initiatives related to runway safety and runway incursion issues. Activities will be broadly spread over the following areas:

- Communications
- Human factors and simulation
- National training, education, and awareness
- Data gathering, management, and analysis

The FAA will continue established activities related to training, education, and awareness as well as initiate new activities that strengthen these areas. Training, education, and awareness initiatives provide the best opportunity to reduce the number of runway incursions and surface incidents. This area remains our highest priority. The FAA also has an established communications and awareness strategy, designed to disseminate information concerning runway safety activities and data.

The FAA will be conducting studies and performing analyses regarding human factors related to runway safety operations and procedures. We will also perform modeling and simulation activities to investigate and validate potential operational and procedural changes.

FAA's "Safer Skies" agenda includes a special focus on reducing runway incursions. FAA is planning to increase capital expenditures by 24% in 2001 to expand the use of technology in preventing runway incursions.

- FAA plans to continue development of procedures, training programs, and potential improvements to airports to reduce runway incursions (\$8.1 million compared to \$3.3 million in 2000).
- FAA will also begin procurement of a prototype low-cost surface detection system that could be used to assist controllers in locating airport surface traffic (\$8.4 million compared to \$7.6 million in 2000).
- FAA will upgrade all 40 Airport Surface Detection Systems and begin replacement of obsolete components at those airports with surface detection systems. (\$1.5 million).
- FAA's Runway Incursion Program Implementation Plan provides for the continuation of training enhancements and awareness of surface incident problems. This plan includes increasing the number of Runway Incursion Action Team visits, and improvements in determining trends and providing problem solution information to prevent incursions. Aggressive campaigns will continue to promote pilot and airport operator involvement in issues related to surface incident awareness.

- Installation of Airport Movement Area Safety System (AMASS) systems on the 40 ASDE-3 systems will be completed in 2001. AMASS will provide information on airport surface hazards and alerts to controllers to help prevent surface accidents.(\$20.7 million).

Other Federal Programs with Common Outcomes:

DOD has developed software, based on radar images, for detection of aircraft and other vehicular movement to reduce runway incursions at military airports.

OPERATIONAL ERRORS (AIR TRAFFIC): One of the fundamental principles of aviation safety is “separation” – the need to maintain a safe distance from other aircraft, terrain, obstructions, and certain airspace not designated for routine air travel. Air traffic controllers employ separation rules and procedures that define separation standards for many different environments where aircraft operate. Pilots flying under visual flight rules operate under a “see and avoid” policy. Pilots using instrument procedures rely on air traffic controllers’ instructions to guide them. When aircraft violate these separation standards, an operational error occurs.

Performance Goals & Results

Performance Measure: Operational errors per 100,000 activities.

Goals:	1999	2000	2001
	.496	.486	.5 *
Actual:	.57		

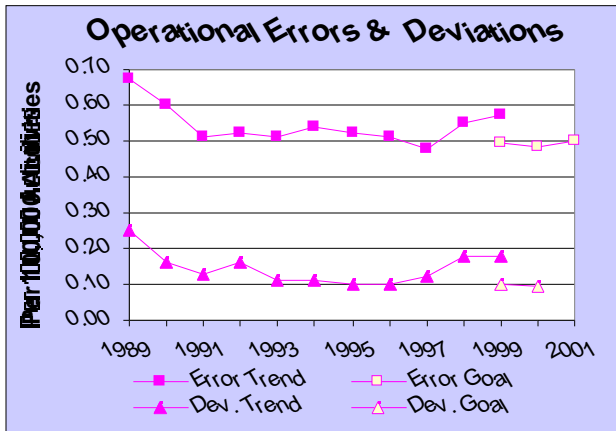
Performance Measure: Deviations per 100,000 activities.

Goals:	1999	2000	2001
	.099	.097	#
Actual:	.18		

* Data reporting issues suggest that it is not realistic to set a goal for operational errors at the level of detail implied by the FY 1999 and FY 2000 goals. Therefore, the FY 2001 goal has been set to only one decimal place.

Discontinued measure in DOT plan after 2000. FAA will continue to monitor deviations.

External Factors: The most significant external factor influencing this measure is the increasing volume of air traffic activity, which adds to traffic complexities. From 1998 to 1999, air traffic volume rose by 4%.



primary responsibility is the day-to-day safe operation of the Air Traffic Management (ATM) system. Rules and procedures are in place to assure separation. Violations of these rules are reported and counted as operational errors and deviations.

In 1999, operational errors totaled 937, or 0.57 per 100,000 facility activities, missing the goal of 816, or 0.496. Deviations were 0.18 per 100,000 facility activities, missing the goal of 0.099.

The Office of Air Traffic Planning and Procedures is using information on causal factors to develop and improve procedures to help reduce the error rates. The Office of Air Traffic Resource Management is also using this information to address training issues. The top three causal factors for operational errors/deviations are:

1. Failure to project future status of displayed data,
2. Failure to maintain awareness of displayed data, and
3. Failure to detect displayed data.

Special evaluations have been conducted on a case by case basis at facilities with increasing numbers of operational errors/deviations. Processes common to all facilities were broken down into five areas and observed: traffic management relationships, quality assurance programs, training issues, management involvement, and control room environment. Additional emphasis has been placed on increased involvement of facility managers including mandated time-in-operational-quarters requirements.

FAA continues to conduct quarterly safety meetings with all regional Quality Assurance Staff managers. These meetings include presentations on operational error/deviation causal factors; reviews of performance trends attributable to errors/deviations; and identification, review, and dissemination of successful operational error/deviation reduction initiatives.

FAA developed a change to Order 7210.56A, Air Traffic Quality Assurance, to require facility management and regional air traffic division involvement in controller re-certification following an operational error/deviation (Effective May 1, 1999).

FAA also developed a Quality Assurance Review (QAR) process to identify and correct controller performance deficiencies prior to occurrence of an operational error or deviation. QARs provide the means to identify, investigate and resolve performance

deficiencies through corrective training (Effective May 1, 1999).

FAA believes that some portion of the increase in operational errors and deviations since 1997 are attributable to improved data reporting. In August 1998, the FAA discovered and corrected a misunderstanding of the procedures used in interpreting separation reported by the National Track Analysis Program (NTAP) and the data provided by the Operation Error Detection Patch (OEDP). (See Appendix 1 – Performance Measures (Detail) for additional information on the data used to track operational errors and deviations.) This correction should result in an increase in the number of operational errors reported. (An error occurs when separation between aircraft is less than the separation determined necessary for the specific phase of flight. Standard separation is 5 miles.)

FY 2000 Performance Plan Evaluation: The increase in the number of errors and deviations resulting from improved reporting make it unlikely that the FY 2000 goals for Operational Errors and Deviations will be met. The FY 2000 goal was set based on the trend line prior to the data reporting correction.

In FY 2000, the FAA will continue to aggressively investigate every operational error. A detailed report on each operational error and deviation identifies causal factors including equipment, procedural or human performance issues. When an operational error and deviation is identified, the controller(s) whose performance is determined to have contributed to the incident is removed from operational duties until an incident specific investigation is completed. Comprehensive retraining and corrective actions are identified for each operational error and deviation to prevent a recurrence under similar circumstances.

Strategies and Initiatives to Achieve 2001 Goal: The goal is to reduce the operational error rate to .5 in 2001 – to a total of 859 errors. One of the major approaches to reducing operational errors is to provide a common understanding of procedures and policies among controllers and users. Training for controllers and pilots is central to this and will continue to be the focus of Air Traffic Service safety strategies. Technological improvements such as deployment of modern displays, new decision support tools, and improved communication systems will support better determination of aircraft location and reduce communication errors between pilots and controllers. In 2001, FAA will:

- Address and reduce repeat incidents by individuals through meaningful individual skill enhancement/remedial training.
- Implement a requirement for facilities to provide corrective action to significant problems identified by facility evaluations within 5 days.
- Conduct special assessments of selected facilities that have increases in the operational error rate.
- Continue annual controller skill checks to identify deficiencies and areas where special training is needed.

Other Federal Programs with Common Outcomes:

None

RECREATIONAL BOATING FATALITIES: Recreational boating is a popular activity in America, but one with special risks. There are about 78 million recreational boaters in the U.S. – and people operate them in an often remote and unforgiving environment. As a result, about 800 people lose their lives every year, usually by drowning.

Performance Goals & Results

Performance Measure: Number of recreational boating fatalities.

Goals:	1999	2000	2001
Original:	720	720	--
Revised:	763	763	749

Actual:

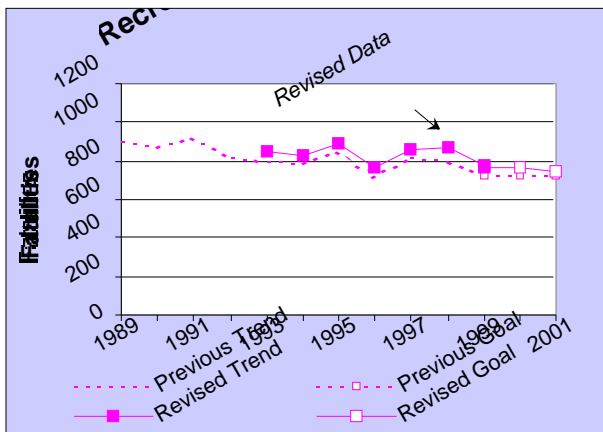
Original: 729*

Revised: 773**

* January 1999 Preliminary Data

** Estimate based upon 1999 Preliminary Data

Note on Revised Data: Beginning this year, this measure will be revised to account for underreporting of recreational boating fatalities. (Further revisions in the data may be made in the future when the Coast Guard completes its review of the Boating Accident Report Database (BARD).) The Coast Guard's preliminary estimate is that 6% of all recreational boating fatalities are not captured in its Boating Accident Report Database (BARD), due to the failure of recreational boat owners/operators to report fatalities to the appropriate state boating law administrator. The revised data and revised goal include this 6% discrepancy. The original



goal of 720 has been increased by 6% to 763. Based upon the preliminary data of 729 fatalities reported, we estimate that at least 773 fatalities occurred in 1999. See Appendix I for more information. Further, reference draft OIG report on Recreational Boating Safety.

External Factors: A growing US population and a growing US economy leads to growth in the number of

recreational boats. Success of our efforts is, in part, dependent on the effectiveness of many individual state-run education and enforcement programs. Also, boater behavior is often difficult to influence – for example, boaters tend to decline to wear life jackets, ignoring the risks associated with the nature of their boating activity.

1999 Results: Preliminary data indicates we missed our revised goal of reducing fatalities to 763 or fewer; based upon actual reporting of 729 fatalities, we estimate that 773 fatalities occurred in 1999. Although the five-year trend in fatalities is uncertain, the 25-year trend shows a marked decrease in fatalities due to cooperative boating safety education and enforcement efforts, safer boats and equipment manufactured in accordance with Coast Guard standards, and increased life jacket use.

The vast majority of boating fatalities were the result of accidents involving operator controllable factors. Obviously the best way to limit fatalities is to prevent these accidents. However, even when these accidents occurred, boaters had a vastly improved chance of surviving if they wore a life jacket. More than half of all fatalities were the result of capsizings or falls overboard and 80 percent of those victims drowned. Overall, about 80 percent of all drowning victims were not wearing life jackets.

Further evidence of life jacket effectiveness comes from analysis of personal watercraft accidents. Although personal watercraft are historically involved in as many accidents as open motorboats, more than five times as many fatalities occur in open motorboats. Accident data suggests the greater usage of life jackets by personal watercraft users results in the significantly lower number of deaths.

FY 2000 Performance Plan Evaluation: The revised FY 2000 target is 763 fatalities or less. Having missed this target in FY 1999, but given the overall long-term progress in reducing boating fatalities, the Coast Guard feels this is an achievable goal. To reduce fatalities in 2000, we will continue to assist state boating safety programs; conduct safety education campaigns; and encourage boater education programs that incorporate new National Association of State Boating Law Administrators Operator Proficiency Standards with the primary focus on improving boater skills and behavior to reduce accidents. We will continue a research effort to improve lifejacket comfort and wearability, thus

promoting greater usage. The FY 2001 goal may be revised in the Revised Final Plan to reflect actual performance in 2000.

Strategies and Initiatives to Achieve 2001 Goal: DOT aims to reduce boating fatalities by: developing and enforcing compliance with safety standards for recreational boats and equipment; promoting the wearing of personal flotation devices (PFD); improving boater behavior, skills, and knowledge; intensifying enforcement of drunk boating statutes; and conducting Coast Guard Auxiliary courtesy examinations and boating education courses to promote safe operation and use of safety equipment.

- The Coast Guard will continue aggressive programs to prevent boating accidents and to rescue those in imminent danger. The focus for FY 2001 will continue to be on increasing PFD usage, and enhancing response capabilities.
- The Boating Safety Grants program will provide funds to states to support education, outreach, and law enforcement. This program, reauthorized in TEA-21, is funded at \$64 million for FY 2001 (the same as in FY 2000).
- Search and rescue boat crews will be provided a higher level of personal safety, especially for cold weather operations, to improve their ability to successfully rescue boaters in distress.
- The Coast Guard Auxiliary will expand its capability to conduct courtesy examinations of recreational boats, and to provide boats and aircraft to assist with maritime search and rescue.
- The Coast Guard Recreational Boating Safety program will continue to develop safety regulations in cooperation with manufacturers and standards organizations, investigate consumer complaints of non-compliance with standards, and monitor manufacturers' equipment recalls.
- The Coast Guard plans to address the issue of unreported fatalities with the National Boating Safety Advisory Council in April 2000.
- The national boating safety study being commissioned by the Coast Guard will provide valid and reliable information on boating practices, safety, and exposure. This information will enable safety officials to assess boating risk, implement appropriate safety intervention strategies, and measure the effectiveness of program activities in reducing the risk and negative outcomes associated

with the use of recreational boats. Data collection will commence in the Fall of 2001.

- The response capability of the Coast Guard will be enhanced in the future with the deployment of the Global Maritime Distress and Safety System. This technology will automate the Coast Guard's ability to sort, evaluate, and identify distress alerts, including automatic plotting on electronic chart displays to help take the "search" out of search and rescue. \$3.1 million in funding has been included in the 2001 budget to begin this project.

Other Federal Programs with Common Outcomes:

The U.S. Army Corps of Engineers and the National Park Service manage many recreational lakes that are used by boaters. The Coast Guard and Coast Guard Auxiliary work with state and local governments and safety organizations such as The Boat/U.S. Foundation and the U.S. Power Squadrons to provide boating education and training programs. We assist boaters in finding the right class for their needs. We also partner with the National Association of State Boating Law Administrators, National Safe Boating Council, Safe America Foundation, insurance industry, and boat manufacturers to promote public service safety messages and distribute information on boating equipment safety recalls. The Coast Guard meets regularly with state boating law administrators to share information and refine strategies for reducing fatalities. Boating safety legislation establishes the coordination of activity and funding between the Coast Guard and state boating programs.

MARINER RESCUE: Over 50,000 ships and boats are reported in distress or in urgent need of help every year in the U.S. Operating in a remote and often very harsh environment, many mariners lose their lives, many more are injured, and billions of dollars of property are at risk. Since the 1700's, mariners have depended on the Coast Guard to provide rescue services in time of need.

Performance Goals & Results

Performance Measure: Percent of mariners reported in imminent danger who are rescued.

Goals:	1999	2000	2001
	93%	93%	N/A
Actual:	95%#		

Performance Measure: Percent of property reported in imminent danger saved.

Goals:	1999	2000	2001
	N/A	80%*	N/A
Actual:	80%#		

New Performance Measure: Percent of all mariners in imminent danger who are rescued.

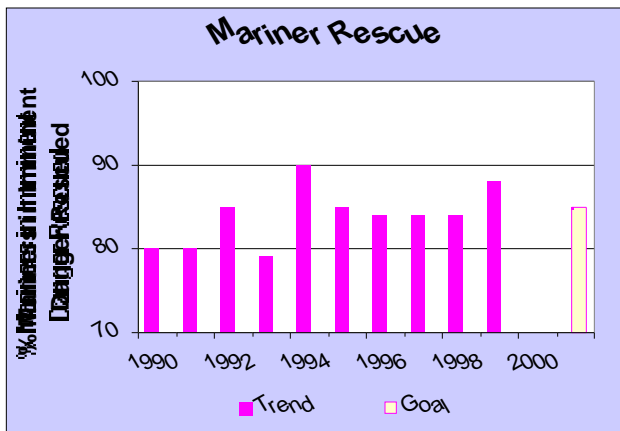
Goals:	1999	2000	2001
	N/A	N/A	85%**
Actual:	88%		

FY 2000 Goal only

** Revised/expanded performance measure for 2001

Preliminary 1999 data

External Factors: Several factors compound the difficulty of successful response: untimely notification to the Coast Guard of distress, incorrect reporting of the distress site location, severe weather conditions at the distress site, and severe property damage.



mariners reported in imminent danger was exceeded. The actual percentage was 95%.

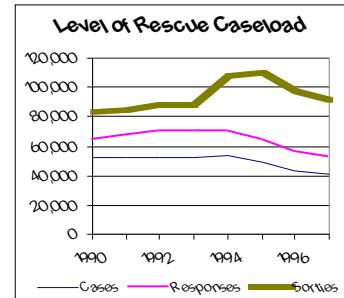
Our 2001 goal of saving 85 percent of all mariners in distress was also achieved in 1999. The actual percentage

was 88%. In analyzing the trend, the goal will remain 85 percent for 2001. Coast Guard responded to 39,834 distress calls and saved 3,744 lives.

Historically the majority of search and rescue cases involve recreational boats, commercial fishing vessels, and "people only" (swimmer, diver, etc.) These cases also make up the majority of lives lost.

Over the past several years the number of search and rescue cases has decreased because of better safety awareness and the maturing of the commercial assistance industry, which now handles many non-emergency cases. Consequently, the resource hours needed for search and rescue have dropped. However, the number of severe cases where lives are most likely to be lost has remained relatively constant.

While there will always be some number of lives the Coast Guard will not be able to save due to the severity, location, or circumstances of the distress, there are improvements that can be made. The National Distress and Response System –our maritime



emergency radio network will be modernized (to be completed in 2005) to eliminate the more than 65 existing communications gaps, and add direction finding and immediate recorded voice playback capability. NDRS's direction finding capability will reduce the amount of time expended on hoaxes and false alarms – 25 percent of all SAR time.

FY 2000 Performance Plan Evaluation: Based on program performance in FY 1999, we expect to achieve the goal set in the FY 2000 performance plan.

Strategies and Initiatives to Achieve 2001 Goal: Coast Guard aims to save as many lives and as much property as possible by operating fleets of cutters and aircraft, and rescue stations; using search sensors and search planning tools and tactics; and requiring (by regulation) mariners to use survival gear, distress notification, alerting, and locating equipment.

- The Coast Guard operates cutters, aircraft, and rescue stations for immediate response to mariners in distress (\$383 million). In FY 2001, the Coast

Guard will increase safety by providing additional personnel for surf boat crews operating in high surf conditions on the West Coast, and personnel protective equipment to improve their ability to rescue boaters in distress. (\$1.3 million for crews, \$1.8 million for equipment)

- In FY 2001, Coast Guard will undertake R&D to improve search planning by updating the search-planning model to incorporate data on the effect of surface winds on search targets, and improving search algorithms by employing sophisticated probability mathematics, improved surface current data, and self-locating datum marker buoys. (\$457,000)
- In FY 2001, Coast Guard will continue modernization of the National Distress System to improve the ability of mariners in distress to notify the Coast Guard - a critical factor in saving more lives. (\$22 million)
- Operating new 47-Foot Motor Life Boats and replacing Coastal Patrol Boats will expand the Coast Guard's capability to meet heavy weather SAR, and continue effective SAR services in the coastal zone where most recreational boats operate. (\$2.5 million 47' MLB follow-on, \$625,000 O&M for Coastal Patrol Boats)
- The International Maritime Information Safety System (IMISS) will allow the maritime community to proactively intervene into unsafe practices and procedures before they materialize into an accident. (\$398,000)
- The Commercial Fishing Vessel Safety initiative will enhance prevention activities, promote compliance within the commercial fishing industry, increase Coast Guard boarding team expertise for more efficient enforcement actions and save lives.
- The Coast Guard provides 24-hour watches at regional Rescue Coordination Centers, and manages the worldwide Automated Mutual-Assistance Vessel Rescue System – which provides position and communications information on vessels that are available to assist others at sea.
- Coast Guard will seek to improve requirements for vessels to carry distress location equipment and survival gear.
- The Coast Guard will improve its command, control, and communications systems by updating planning tools, information systems, and implementing the

Global Maritime Distress and Safety System. (\$3.1 million)

Other Federal Programs with Common Outcomes:

The US Navy and Air Force have search and rescue capability, primarily for their own vessels and aircraft. The National Search and Rescue Manual establishes responsibilities and cooperative efforts between organizations that have search and rescue capabilities. The Air Force is the lead agency for land-based search and rescue; the Coast Guard is the lead for maritime search and rescue. Each assists the other depending on resources available for a particular search effort. Information is shared through formal search and rescue schools, and at search and rescue conferences and forums held worldwide.

PASSENGER VESSEL SAFETY: Each year over 90 million passengers are carried aboard cruise ships, ferries, charter fishing boats, sightseeing boats, gaming vessels, and other commercial passenger vessels in the U.S. Collectively, these vessels provide one of the safest forms of transportation. But the 1999 fire onboard the 1,100 passenger cruise ship *Tropicale* highlights the potential for disaster that exists. We are seeing newer vessels with much higher passenger capacities than in recent decades, raising the risk for a major loss of life. Trends in high risk “precursor” casualties – fire, capsizing, flooding, collision, allision, sinking, grounding – indicate that while fatalities are very low, the underlying risk is still very real.

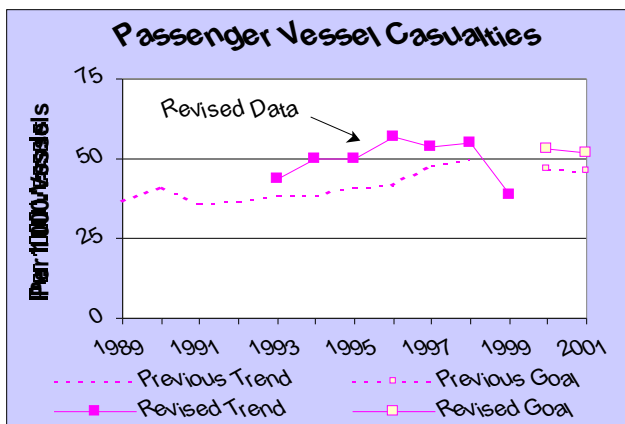
Performance Goals & Results

Performance Measure: Number of high-risk passenger vessel casualties per 1,000 vessels.

Goals:	1999	2000	2001
Original:	N/A	47	46
Revised:	N/A	53	52
Actual:	39 *		

* 1999 preliminary results are based on revised data

Note on Revised Data: The Coast Guard has revised the analysis methodology that defines this indicator. The revised indicator provides a more accurate and repeatable depiction of high risk casualty rates over time. The original 2000 target for passenger vessel casualties was 47. That converts to 53 using the new methodology. This represents the same proportional reduction that our programs were aiming for in the original target: 10 percent over the 5-year period 1999-2003. See Appendix I for more information. The graph provides the previous trendline and goals for comparison.



External Factors: The technological advancement of passenger vessels increases the complexity of their operation and maintenance. Also, growth in “gaming” vessels in recent years has increased the exposure of the public to passenger vessels. Many passenger vessels (particularly cruise ships operating from U.S. ports) are foreign flag vessels, subject to international standards.

Some rulemakings or changes deemed helpful by the Coast Guard require lengthy international negotiation.

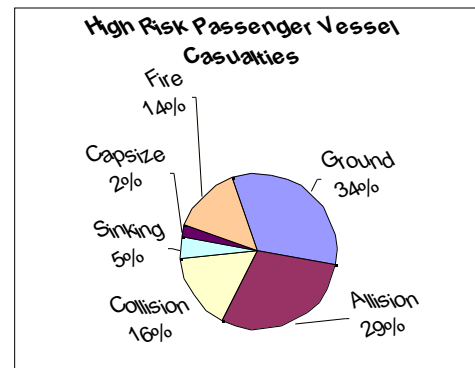
1999 Results: This DOT measure was established in the FY 2000 Performance Plan. Our first report and analysis on the new measure is due in next year’s FY 2000 Performance Report. While there is no target for 1999, preliminary results show the rate dropping by 16 casualties per 1,000 vessels, a very large single-year change that already exceeds our goal for 2000. The Coast Guard will further analyze the final 1999 results, when available, to determine the significance of this drop. The Coast Guard does believe that the rate may be declining after several years of increases.

Passenger vessel traffic is rapidly growing on cruise ships, gambling ships, and passenger ferries, and the number of high-speed, high-capacity passenger vessels is booming. From historical data, we know that collisions, allisions, and vessels running aground make up a majority of passenger vessel accidents – and most of these are caused by human error.

But we also know that the

highest danger to passenger safety generally occurs in the lower frequency incidents, such as fire, capsizings and sinkings. These, too, are incidents frequently caused by human error, as well as by equipment and vessel condition. The Coast Guard’s Prevention Through People program and implementation of International Safety Management Code target these causes.

FY 2000 Performance Plan Evaluation: In 2000, we will continue to partner with industry and conduct research projects to reduce human error. Analysis of the preliminary 1999 results will continue. The revised 2000 goal of 53 casualties per 1000 vessels appears realistic given suspected gains in 1999, but the long term



direction of the trend remains uncertain and revision to the goals will be considered only after additional data is gathered.

Strategies and Initiatives to Achieve 2001 Goal: The Coast Guard develops and enforces safety standards for passenger vessel design, construction, equipment, operation, manning, and maintenance. USCG also certifies the officers and crew.

In FY 2001 special attention will be given to human factors, a streamlined and risk-based inspection program, and international standards. The Coast Guard will:

- Manage a comprehensive Marine Safety program.
- Develop risk-based programs to improve passenger vessel safety. Implement, expand, market, and evaluate the Streamlined Inspection Program; and implement the Alternative Compliance Program.
- Continue to implement the International Safety Management Code.
- Conduct oversight of technologically advanced vessels such as high-speed ferries, and continue oversight of third parties such as classification societies and independent laboratories.
- Identify Prevention Through People corrective actions to reduce passenger vessel accidents.
- Continue productive partnerships with the Passenger Vessel Association and the International Council of Cruise Lines.
- Advance the body of research on mariner qualifications and training.
- The Coast Guard will integrate risk based decision making into all mission activities in order to prioritize, and select optimal actions to reduce the risk of vessel casualties.

Other Federal Programs with Common Outcomes: The National Transportation Safety Board investigates major maritime accidents; USCG participates in these investigations, and independently investigates less serious accidents to determine cause and evaluate trends. Using these investigations, the Coast Guard and NTSB cooperate on identifying and implementing strategies to reduce future accidents.

MARITIME WORKER FATALITY RATE: Maritime shipping and commercial fishing are dangerous businesses. Fishing, in particular, has been cited as one of the most dangerous occupations in America. And while the total numbers of maritime worker fatalities are not very high, fatality rates are 4-5 times the average for all occupations in the U.S.

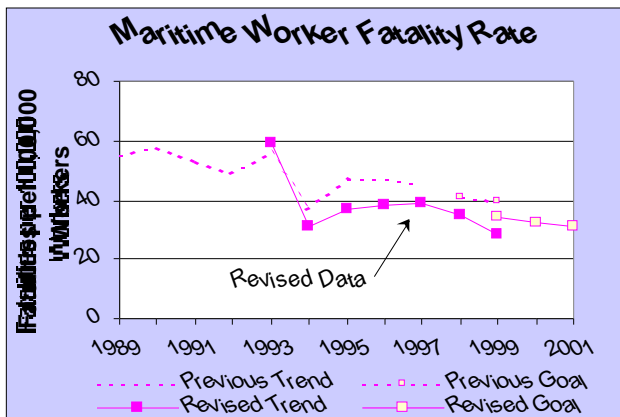
Performance Goal & Result

Performance Measure: Fatalities per 100,000 workers aboard commercial vessels. (This measure was discontinued in the DOT plan after 1999. The Coast Guard still tracks it.)

Goals:	1999	2000	2001
Original:	42	--	--
Revised:	34	--	--
Actual:	28*		

* 1999 preliminary results are based on revised data

Note on Revised Data: The Coast Guard has revised this indicator to more accurately reflect the fatality rate. As a result, the trend line has lowered slightly. The DOT FY 1999 Performance Plan set a 1999 target of 42 deaths per 100,000 workers. The revised target is 34, and represents the same proportional reduction as the original target: 20 percent over the 5-year period 1999-2003. See Appendix I for more information. The graph provides the previous trendline and goals.



External Factors: In the fishing industry, dwindling fish stocks and overcapitalization of the industry has led to fierce competition. In the commercial maritime industry, the strong economy and demand for labor may have lowered the average experience levels of workers, although it is difficult to tie this causally to increased accidents.

1999 Results: Preliminary data indicate we met our revised goal for reducing the maritime worker fatality rate to 34 deaths per 100,000 workers. The preliminary rate was 28.

Analysis of the 1999 preliminary data reveals a significant drop in the commercial fishing fatality rate. The rate of towing vessel fatalities edged up slightly, but the single-year significance of this is indeterminate. There has been a general reduction in the aggregate maritime worker fatality rate since 1997. While there are many factors that may be influencing such a trend, this decline coincides with collaborative Prevention Through People Initiative that promote better industry awareness of safety risks, and reduce the sizable role human error plays in fatalities.

The largest percentage of maritime worker fatalities occurred in commercial fishing. While the Commercial Fishing Industry Vessel Safety Act of 1988 has helped reduce fishing vessel fatalities 20 percent from pre-Act levels, dwindling fisheries stocks, more competition, and regulated limited-time fishing seasons have increased risk-taking by fishermen and made fishing-related deaths an ongoing problem. Compounding this is the fact that fishing vessels have relatively few required safety standards. The diverse nature of this industry makes it difficult to develop universal fishing safety regulations – vessels vary greatly in size and operate in a wide range of locations and climates.

In 1999, the Coast Guard conducted an evaluation of fishing fatalities, and began implementing recommended ways to reduce these fatalities. The long-term recommendations included instituting safety examinations, inspections and operator licensing; developing safety and stability standards; coordinating fisheries stock management with safety; and improving casualty investigation data. In 2000, we will continue to implement these recommendations to reduce fatalities. Safety awareness efforts focused on reducing human error, along with regulation enforcement should contribute to the long-term reduction of fatalities.

FY 2000 Performance Plan Evaluation: This performance measure has been discontinued in the DOT Performance Plan (although it is still tracked by the Coast Guard). The new Passenger Vessel Safety goal reflects an area of safety performance with more broad public impact.

RAIL ACCIDENT & FATALITY RATES: In 1999 (January through November), 849 deaths were attributed to rail operations. Freight railroads account for 40 percent of the Nation's traffic as measured by ton-miles and projections indicate a growth rate in freight railroad traffic of 1.4 percent per year for the foreseeable future. In addition, passenger rail service is also experiencing significant growth as more travelers are turning to commuter and intercity rail as a viable transportation alternative.

Performance Goals & Results

Performance Measure: Train accidents per million train-miles.

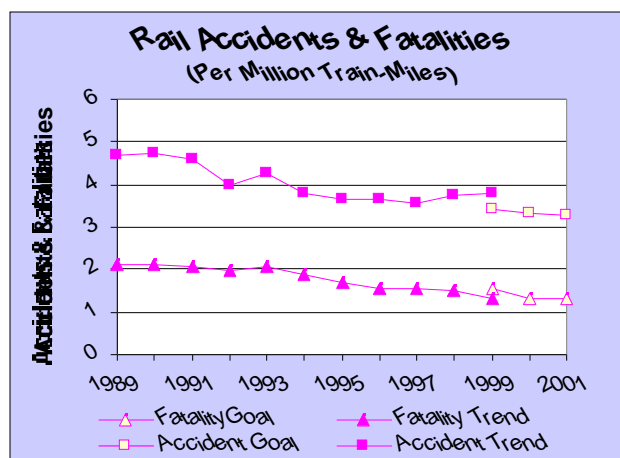
Goals:	1999	2000	2001
	3.44	3.38	3.29
Actual:	3.79 *		

Performance Measure: Rail-related fatalities per million train-miles.

Goals:	1999	2000	2001
	1.57	1.30	1.23
Actual:	1.30 *		

* The rates are based on preliminary data for an eleven-month period (January-November 1999).

External Factors: The structure of the railroad freight industry is changing dramatically, with the number of Class I railroads declining from 58 in 1976 to 9 in 1999 and the number of Class II and Class III railroads increasing from 586 in 1993 to approximately 700 in 1999. Freight railroads account for 40 percent of the Nation's intercity traffic as measured by ton-miles.



1999 Results: Although the data for 1999 are preliminary and based upon an eleven-month period, it appears that the 1999 goal for rail-related fatalities will be met; however, the train-accident-rate goal may fall short. The preliminary 1999 train accident rate was 3.79, a slight increase over the 1998 rate of 3.78 for the same eleven-month period, and above the 1999 target of 3.44. Although train accidents were higher in 1999, total train-

miles increased significantly (almost 4%) over the previous year. (The train-accident count and rate exclude highway-rail collisions.)

While FRA is not satisfied that the train accident rate remained roughly constant from 1998, we are pleased at the overall success we have had over the past six years. Since 1993, this rate has dropped more than 10%, and FRA is confident that it can continue to meet projected targets.

Primarily, the increase in the train accident rate was attributable to accidents caused by human factors (3.6% rise over 1998) and those that were track-related (6.1% rise over 1998). Part of the increase may be attributable to recent rail consolidations, primarily in the western U.S.

The rail fatality rate for the eleven-month period in 1999 was 1.30, compared to FRA's goal of 1.57 for the full year. If this trend continues, it will be the lowest rate in a decade. Both grade crossing and trespasser fatalities are included in this rate and, together, make up about 90% of all rail-related fatalities.

The work of both the Safety Assurance and Compliance Program (SACP) and the Railroad Safety Advisory Committee (RSAC) has contributed to overall rail safety improvements. In 1999, RSAC-related rulemakings included final rules for "Qualification and Certification of Locomotive Engineers," and revisions to Steam Locomotive Inspection regulations. Under traditional rulemaking procedures, a final rule for "Passenger Equipment Safety Standards" was issued.

The RSAC also continued developing standards for roadway equipment machines, locomotive crashworthiness, locomotive sanitation, positive train control systems and event-recorder-data survivability. Notices of proposed rulemaking for locomotive sanitation, locomotive crashworthiness, and roadway equipment machines are expected to be issued in 2000. FRA conducted SACP examinations on all Class I railroads and many of the nation's commuter rail authorities to identify systemic safety problems. Smaller regional and local railroads underwent similar reviews.

FRA also strengthened the SACP as recommended in the Office of the Inspector General's 1998 report. It provided its safety inspectors additional guidance on

methodology and documentation requirements involving SACP planning and coordination, resolution of safety issues, and monitoring remedial actions taken by railroads. FRA also developed updated enforcement guidelines for its inspectors and prepared a composite listing of all systemic safety issues for prior SACP projects that included the status of each safety issues.

To counter the growing number of incidents involving human factors, FRA continued the research and development of fatigue countermeasures. Additionally, FRA has been actively encouraging all railroads to develop Fatigue Management Plans, aimed at addressing fatigue issues among railroad employees. FRA also continued its compliance and assistance audits for drug and alcohol use on railroads, and conducted education conferences for rail labor and management on Federal drug and alcohol regulations.

FY 2000 Performance Plan Evaluation: Although the 1999 goal for the train accident rate was not met, FRA expects to meet both the fatalities and train accident rate goals set for CY 2000. Human factors played a significant role in the train accident rate in 1999, and FRA is placing heavy emphasis on fatigue-related safety issues again in year 2000. The Administration has proposed legislation that would require railroads to develop and implement fatigue management plans covering train, dispatching service, signal, and track maintenance employees.

Strategies and Initiatives to Achieve 2001 Goal: DOT will continue and expand: 1) the SACP, which brings together rail labor, management, and FRA to determine the root causes of systemic railroad safety problems; 2) the RSAC and its concept of negotiated rulemaking; and 3) the Technical Resolution Committee to speed up the rulemaking process and to correct system-wide problems in the railroad industry. Significant research and development initiatives are aimed at technological safety advances. Many programs are aimed specifically at reducing grade crossing crashes (see separate goal for this area).

- FRA will continue to expand SACP and RSAC work to speed up rulemakings and to correct system-wide problems in the railroad industry. \$117 million is dedicated to all safety-related activities in FY 2001, up 6% from FY 2000.
- FRA will invest \$300,000 for a comprehensive fatigue countermeasure campaign. New research will be aimed at identifying causes of human performance errors, developing mitigation strategies, evaluating new technologies to aid operators,

identifying training needs, and studying man-machine interfaces.

- FRA will expand projects in Train Occupant Protection, the Automated Track Inspection Program and wayside inspection technology, as well as begin new projects in electronic brake systems, Positive Train Control (PTC) and grade-crossing research.
- FRA will pursue research and development activities to determine the causes of equipment failures, to develop devices and techniques which identify degraded equipment and components before they fail, to test potential inspection systems, and to implement proven systems into revenue service.
- Research will also be conducted in hazardous materials transportation safety, track and component safety, track-train interaction, grade-crossing safety, and safety of high-speed ground transportation systems.
- FRA continues to perform phase II work on passenger equipment safety standards and to advance Positive Train Control systems, using the National Differential Global Positioning System (NDGPS) as a source of location information. For FY 2001, a multimodal approach is planned to coordinate strategy for enabling infrastructure. NDGPS will provide the positioning, navigation and timing accuracy, which is critical to improving safety on the Nation's surface intermodal transportation network.

Other Federal Programs with Common Outcomes: None.

HIGHWAY-RAIL GRADE CROSSING ACCIDENTS: In 1999, (January through November) 849 deaths were attributed to rail operations. Over 43% of these fatalities were caused by collisions between automobiles or trucks and trains. Every day, people attempt to beat a train to the railroad crossing – endangering their lives, as well as those of train crewmembers and passengers.

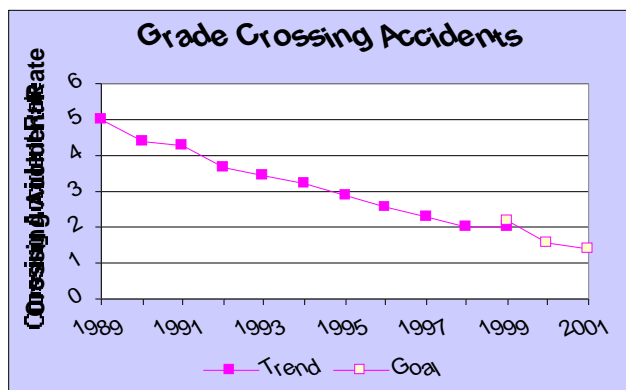
Performance Goal & Result

Performance Measure: Grade crossing accidents divided by the product of: 1) million train-miles and 2) trillion vehicle-miles-traveled.

Goals:	1999	2000	2001
	2.19	1.57	1.39
Actual:	2.00 *		

* The rate is based on preliminary data for an eleven-month period (January-November 1999)

External Factors: U.S. railroad activity is rapidly expanding and America's freight railroads are becoming increasingly congested. Since 1990, revenue ton-miles have risen by more than a third. Since 1986, the number of rail passenger miles has risen by almost 25%. Additionally, there are approximately 160,000 public and 100,000 private grade crossings nationwide. All of the factors increase the risk and likelihood of increased highway-rail crossing accidents.



FRA will reach its 1999 goal for grade crossing accidents. The preliminary 1999 rate was 2.00 vs. 2.18 in 1998. Since 1993, the rate has declined a spectacular 42%. Although train-miles and total vehicle-miles-traveled rose in 1999, there was also a significant drop in total grade-crossing accidents nationwide. FRA was able to improve last year's rate by lowering total accidents almost 2.4%, from 3,214 to 3,138 over the eleven-month period.

The rail grade crossing accident rate has declined each year since 1987, with the 1999 rate being the lowest since FRA began collecting data in 1975. With the exception of 1994, the actual number of accidents has fallen every year since 1988. During the same period,

train-miles rose 12% and vehicle-miles climbed almost 30%.

For the 1999 eleven-month period, fatalities from crossing accidents dropped almost 10% over the prior year, from 404 to 367. Of the 3,138 crossing accidents in 1999, almost one-third occurred in just five States: California, Illinois, Indiana, Louisiana, and Texas. Those same 5 States accounted for 42% of the fatalities resulting from crossing accidents and 36% of the injuries.

Activities in 1999 that contributed to FRA's successful results include the work of the Safety Assurance and Compliance Program (SACP), which provides the overall umbrella for a healthy partnership with the rail industry. Also, FRA forged meaningful partnerships with railroads, States, and local communities to produce effective outreach programs. Some specific activities included:

FRA provided its Highway-Rail Grade Crossing managers with camera-ready art, video, and pamphlets for use at outreach, town hall, and local law enforcement meetings to promote "Always Expect a Train."

FRA partnered with Kentucky Operation Lifesaver, the city of Louisville, Kentucky, and the local school system to improve safety at railroad crossings, thereby receiving the Secretary's "Community Partnership Award."

FRA provided \$600,000 for Operation Lifesaver, Inc. (OLI), which represents almost 50% of OLI's annual budget for operations and programs. (OLI is a nonprofit national organization devoted to preventing and reducing crashes, injuries and fatalities and improve driver performance at the nation's 260,000 public and private highway-rail grade crossings.) A portion of the funding was used to continue the highly successful "Highways and Dieways" public service campaign.

FRA published a set of illustrative guidelines, in conjunction with the Volpe National Transportation Center in Cambridge, MA to show a low-cost method for improving the visibility of trains at grade crossings.

FRA designed new “windows-based” software that is used by railroads and States free of charge to update their grade crossing inventory.

FRA expanded the Grade Crossing Hazard Elimination Program to include eight federally designated high-speed rail corridors to eliminate hazards at public and private grade crossings.

The Office of the Inspector General completed a program review in 1999 to assess the progress made toward achieving the year 2004 goals established in the Highway-Rail Grade Crossing Safety Action Plan (no more than 2,500 crossing accidents and 300 crossing fatalities). The review concluded that DOT’s efforts have been successful.

FRA will implement several of the recommendations made in the program review including focusing on strategies that have been proven effective such as installation of median barriers to prevent driving around lowered gates, use of well-advertised photo enforcement, and imposition of stricter penalties to deter grade crossing violations. They are also developing a separate plan to address trespass prevention and pedestrian safety issues.

FY 2000 Performance Plan Evaluation: Based on program performance in 1999, FRA expects to nearly reach or achieve the extremely ambitious goal set in the 2000 performance plan.

Strategies and Initiatives to Achieve 2001 Goal: DOT sets and enforces safety standards, investigates major train accidents, and educates the public on the dangers associated with highway-rail crossings. DOT continues to develop both ongoing and new technologies aimed at reducing crossing accidents.

- FRA oversees the modification and elimination of grade crossings (\$9 million for grade crossing safety in FY 2001). Also, FHWA provides 10%, or approximately \$639 million, of its Surface Transportation Program (STP) funding to States for highway-hazard elimination, including crossing-hazard-elimination initiatives.
- FRA, FHWA, and NHTSA will continue to actively participate with Operation Lifesaver, Inc. The OLI program helps railroads to close highway-rail crossings, and promotes initiatives aimed at reducing collisions and casualties at highway-rail intersections. FRA has included \$600,000 in its 2001 request for the OLI program, in addition to the \$500,000 in 2001 authorized in TEA 21 for this program.

- In FY 2000, FRA’s highway-rail crossing computer file will be available on the Internet. This information includes Global Positioning System (GPS) data regarding grade crossings, making these files compatible with most mapping programs used for management and planning purposes. This data is vitally important as it allows the FRA, states, and local communities to pinpoint where highway-rail grade crossing accidents occur and to help target “high-risk” crossings for corrective actions.
- FRA requests an additional \$500,000 for a new nationwide public outreach program, focusing geographically and demographically on those States reporting the most grade crossing and trespasser fatalities.

Other Federal Programs with Common Outcomes:
None.

RAIL TRESPASSER FATALITY RATE: In 1999 (January through November), 849 deaths were attributed to rail operations. Trespassers accounted for approximately 50 percent of the total – exceeding highway-rail crossing collisions, which had previously been the major contributor to the number of fatalities. People trespass on rail property for a variety of reasons – to fish off bridges, take shortcuts across the tracks, try to ride on moving trains, or simply to walk along the tracks. All of these are terribly unsafe. With their very heavy weight, trains cannot stop in short distances, and many trespassers lose their lives.

Performance Goal & Result

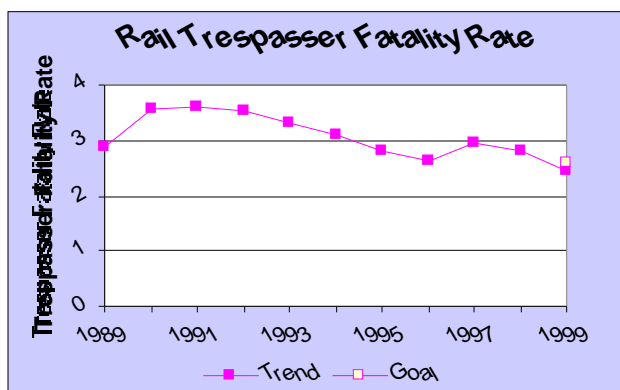
Performance Measure: Number of rail-related trespasser fatalities divided by the product of: 1) million train-miles and 2) billion U.S. population.

Goals:	1999	2000	2001
	2.58	#	#

Actual: 2.46*

Discontinued measure in DOT plan after 1999 *
The rate is based on preliminary data for an eleven-month period (January-November 1999)

External Factors: Since trespassing acts occur on private property, FRA has limited influence in reducing the rail trespasser fatality rate. In addition, reducing the rail trespasser fatality rate is very difficult due to steady increases in train-mile traffic and the growth of the U.S. population in areas that were once isolated segments of rail lines.



1999 Results: Although the 1999 data are preliminary, it appears that FRA will not only reach its goal, but will record the lowest trespasser fatality rate since FRA began collecting data. The rate, which does not include fatalities at grade crossings, was 2.46 for the eleven-month period, a remarkable 17 percent decrease over the 1998 rate of 2.96 for the same period. Not only did the number of fatalities decrease dramatically over 1998 (433 v.s. 501), the rate decline was accomplished in the face of increases in both the U.S. population and the number of train-miles hauled.

Some observations can be made about the trespasser casualties. Of the 433 fatalities, almost 40 percent occurred in four States (California, Texas, Florida, and Illinois), with California recording the largest number - 76. Also, more than 80 percent of all deaths occurred on the properties of five Class I railroads.

FRA has had considerable success over the past decade in lowering the trespasser fatality rate. With the exception of 1997, the rate has declined each year since 1991. The 1999 rate is 31 percent lower than the 1990 rate of 3.57. FRA has been increasingly effective in reducing the number of casualties through partnerships with railroads, States, and local communities. In 1999, FRA developed model legislation for railroad trespassing and vandalism and promoted its adoption among the States.

As noted previously, this goal was discontinued in the DOT Performance Plan after 1999. It was originally included in the FY 2000 Performance Plan to address the significant problem of trespassing on railroad property. However, the effect of the FRA efforts to reduce trespasser fatalities and injuries is already captured in its overarching goals of reducing all rail-related fatalities and injuries. FRA will continue to collect and analyze trespasser data, and to partner with states and railroads to address this issue. The FRA will report trespasser casualties as a component of the overall rail-related fatalities goals.

TRANSIT FATALITY AND INJURY RATES: Public transit provides a flexible alternative to automobile and highway travel, offering a higher degree of safety as well. However, public expectations for safety are higher for transit than they are for highway travel.

Performance Goals & Results

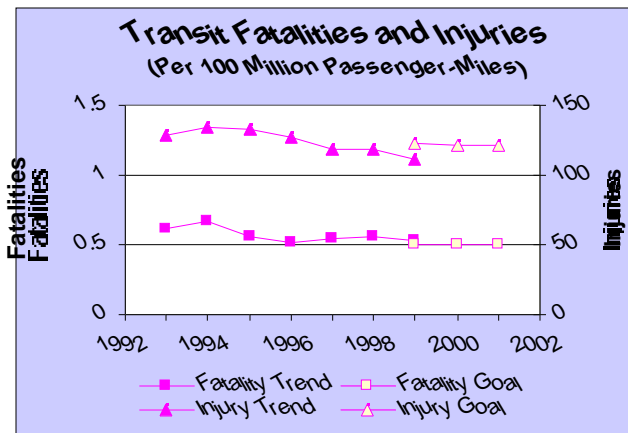
Performance Measure: Transit fatalities per 100 million passenger miles traveled.

Goals:	1999	2000	2001
	.507	.502	.497
Actual:	.531		

Performance Measure: Transit injured persons per 100 million passenger miles traveled.

Goals:	1999	2000	2001
	123.2	121.9	120.7
Actual:	111.6		

External Factors: As the population grows, the use of public transit can also be expected to increase. Increased ridership of public transit would lead to an increase in the absolute number of fatalities and injured persons even if the rate per 100 million passenger miles traveled does not change.



not met, the fatality rate dropped from .564 per 100 million passenger miles traveled in 1998 to .531 in 1999. The 1999 goal for transit injuries was met.

Increased ridership resulting, in part, from expanding rail systems and the purchasing of more transportation provides more opportunities for mass transit accidents to occur. The major causes of transit fatalities/injuries are being investigated in the Transit Accident Causal Factors Study.

Through FTA, the Transportation Safety Institute offered 22 different safety courses at 138 training sessions throughout the United States. The 53,125 student hours

completed by transit personnel in FY 1999 are a measure of the industry's acceptance of the program.

FTA provided technical assistance to states and transit operators subject to FTA's state safety oversight regulation and initiated a compliance audit program. Audits were conducted in seven states: Ohio, Florida, Tennessee, California, Texas, New York, and Pennsylvania.

The 1997 Drug and Alcohol Testing Results (DAMIS) annual report was published December 1998. When the program began, the testing rate was 50 percent for drugs and 25 percent for alcohol. Data developed through the DAMIS report enabled FTA to reduce the alcohol testing rate to 10 percent. The rate of positive random drug tests has not declined significantly. Consequently, the drug-testing random rate is being continued at 50 percent.

Six security audits were conducted on a voluntary basis at rail/bus systems throughout the country and 10 security audits were conducted at bus-only systems. The audit program is advisory only. However, most systems have acknowledged the technical expertise of FTA's audit consultants and have adopted the recommendations resulting from the audit.

The Safety and Security Website continued to provide access to timely and substantive information to the industry and interested members of the public.

The joint FTA/FRA "Policy on Shared Use of the General Rail System," developed in concert with the Office of the Chief Counsel, was published in the Federal Register on May 25, 1999. (The purpose of the joint policy is to ensure that grantees know whether their projects are under FTA or FRA's jurisdiction.) FTA's companion document, "Statement of Agency Policy," was published in the Federal Register on November 1, 1999. Both statements are now open for public comment and are available on the Website. FTA and FRA plan outreach meetings with involved parties (the respective DOT field offices, grantees, and APTA.)

FY 2000 Performance Plan Evaluation: Based on program performance in FY 1999, we expect to achieve the goal set in the FY 2000 performance plan.

Strategies and Initiatives to Achieve 2001 Goal: FTA provides grants to improve the condition of transit infrastructure, and it works with states, local transit authorities, and the transit industry to develop

technology, provide training, and supply technical assistance that advances safety. FTA also conducts research and collects data in order to provide valuable information on safety and standards.

- Through Formula Grants, Capital Investment Grants, and the Job Access and Reverse Commute Programs, FTA invests in the public transit infrastructure. Most of these funds improve transit safety by replacing older bus and rail systems with newer, safer public transit. For new projects, safety is a design consideration from the beginning.
- The Safety and Security Program funded with transit National Research and Technology funds (\$6.1 million in FY 2001, 12% above FY 2000 level) will:
 - develop technology and system designs that will improve the security of the riding public. Activities will include using information technology to improve highway-rail interactions and implement Safety Task Force recommendations.
 - train 4,000 transit professionals on a wide variety of topics such as system security, bus and rail accident investigation, and fatigue awareness.
 - provide technical assistance to states and local agencies to improve the safety and security of public transit. Activities will include guidance on the safety certification process, technical assistance on emergency management, including natural disasters and terrorist attacks, and evaluation of state safety oversight programs.

Other Federal Programs with Common Outcomes:
None.

PIPELINE FAILURES: A network of two million miles of pipelines transport natural gas to 55 million residential and commercial customers. While pipelines are among the safest modes for transporting liquids and gases, the nature of the cargo is inherently dangerous. Pipeline failures – whether due to material failure or outside force damage – can pose an immediate threat to people and communities. Outside force damage is the leading cause of pipeline failures causing on average 39% of all pipeline failures. Corrosion is the second leading cause of pipeline failures causing on average 20% of all pipeline failures. Other causes include incorrect operation, construction/material defect, equipment malfunction, failed pipe, and other miscellaneous causes that account for the remaining 41% of pipeline failures.

Performance Measure: Failures of natural gas transmission pipelines.

Goals:	1999	2000	2001
	4,528	4,451	4,375
Actual:	4,467		

Performance Measure: Failures of hazardous liquid pipelines.

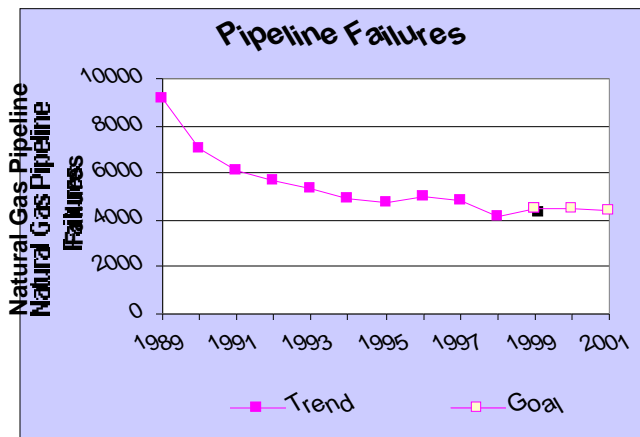
Goals:	1999	2000	2001
	171	#	#
Actual:	159		

Performance Measure: Number of pipeline incidents caused by outside force damage.

Goals:	1999	2000	2001
	137	#	#
Actual:	117		

Discontinued after 1999 – See page 117

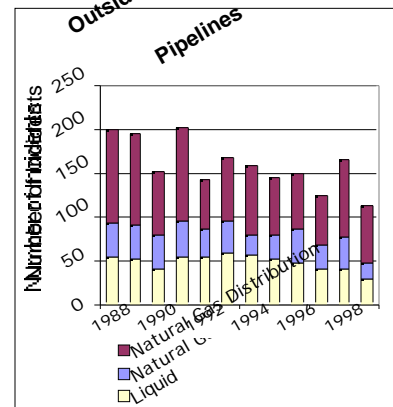
External Factors: Long haul transmission pipelines are often in remote locations and underground. Short haul distribution pipelines – typically in neighborhoods – are most susceptible to outside force damage from digging.



1999 Results: RSPA met all three of the CY 1999 pipeline safety performance measure targets. There were 4,467 natural gas transmission pipeline failures in 1999, which met the goal of 4,528. The 159 hazardous liquid pipeline failures in 1999 met RSPA's goal of 171 or less.

The 117 pipeline failures attributable to outside force damage in 1999 met RSPA's goal of 137 or less. This was also the lowest rate experienced in a decade.

The ten-year trend in outside force damage to pipelines is generally downward although there has been a high level of year-to-year fluctuation. Considering the high level of construction and infrastructure renewal that occurred nationwide in 1999, the reported number of outside force damages for 1999 is especially remarkable.



Distribution pipelines - typically in neighborhoods - are most susceptible to outside force damage from digging. In 1999, RSPA moved forward with a new "Dig Safely" campaign to educate the public on the prevention of damages to all underground facilities. We anticipate that planned Federal, state and industry efforts to raise awareness of one-call centers for alerting utilities before digging will further lower the number of annual excavation caused incidents. DOT set a new goal of reducing "hits" to pipelines by 25% over the next 3 years, beginning with a baseline in 2000, with 25% reduction from the 2000 level by 2004.

In other activities, RSPA, with Batelle, the Southwest Research Institute and Iowa State University is working to determine how in-line inspection technologies may be used for early detection of mechanical damage such as dents, gouges and metal movement, which are precursors to later corrosion failures. The work is progressing and has established that only one survey will be needed to detect corrosion and mechanical damage.

FY 2000 Performance Plan Evaluation: Based on program performance in FY 1999, we expect to achieve the goal set in the FY 2000 performance plan.

Strategies and Initiatives to Achieve 2001 Goal: DOT works to reduce the risk of pipeline failures by establishing safety regulations and assuring compliance. RSPA will raise the bar of overall national pipeline integrity through testing risk management solutions as an alternative to traditional pipeline regulation. A key strategy for reducing outside force damage will be to work with industry to implement “best practices” to prevent damage.

- RSPA’s pipeline safety program (\$47.1 million, a 27% increase over the FY 2000 level) will conduct rulemaking, enforcement, research, and information dissemination efforts. Particular focus will be on expanding and improving RSPA’s risk-based management of federal pipeline inspection activity to focus resources on the highest risk of failure areas.
- RSPA will continue working with states to more fully utilize risk-based factors in state inspection and oversight of intra- and some interstate pipelines. (\$16 million, a 13% increase over the 2000 level)
- To improve the safety and livability of American communities, RSPA will assist communities through increased grants to states to encourage adoption of one-call system best practices, and to increase inspection of pipelines, particularly during new construction. RSPA will also improve training and decision support of inspectors to better assess damage to pipelines at the earliest possible stages. (\$13 million, a 12% increase over the FY 2000 level)
- RSPA will conduct risk management and system integrity inspection pilot programs to address the risks inherent in transporting natural gas and

hazardous liquids. (\$1 million, a 14 % increase over the FY 2000 level)

- RSPA will plan and manage a risk-based compliance inspection and investigation program. (\$0.2 million)
- RSPA will develop curriculum and deliver training to promote compliance with pipeline safety regulations; teach regulatory requirements to industry personnel, particularly small gas system operators; and teach Federal and State inspectors compliance requirements, inspection techniques, and enforcement procedures. (\$1.1 million, a 13% increase over the FY 2000 level)
- RSPA will study technologies and processes to more fully incorporate risk-based approaches into the regulatory program and advance technologies and their applications in various pipeline system configurations. (\$1.9 million, a 12% increase over the FY 2000 level)

Other Federal Programs with Common Outcomes:

We are developing a National Pipeline Mapping System with input and interest from the Federal Energy Regulatory Commission, the National Oceanic and Atmospheric Administration (NOAA), the Department of Energy, the U.S. Geological Survey, and others that will help us analyze risks to environmentally sensitive and populated areas. We participate jointly with the Environmental Protection Agency (EPA), the Department of Agriculture, the Department of Interior and NOAA to collect data on the location of environmentally sensitive areas and are co-funding with EPA the Nature Conservancy efforts at the national and state levels to populate digital data banks. We also are working with the National Association of Pipeline Safety Representatives, trade associations such as the American Petroleum Institute, and other industry partners, in designing new reporting systems and improving data.

HAZARDOUS MATERIAL INCIDENTS: Many of the materials used in manufacturing and many of the retail products people buy include hazardous materials. There are over 800,000 shipments of hazardous materials (hazmat) each day in the U.S. These range from flammable materials and explosives to poisons and corrosives. Release of these materials during transportation could result in serious injury or death, or harm to the environment.

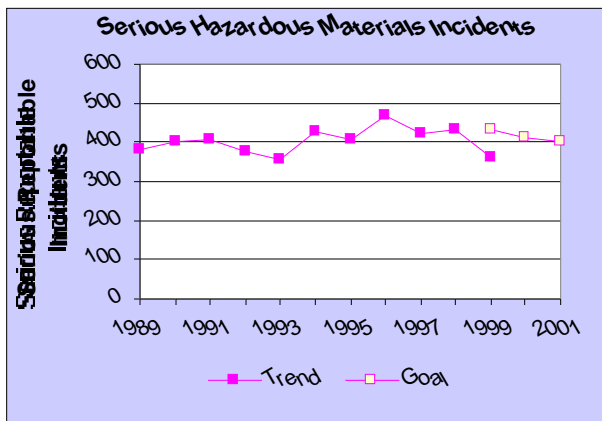
Performance Goal & Result

Performance Measure: Number of serious hazardous materials incidents in transportation.

Goals:	1999	2000	2001
	430	411	401
Actual:			363*

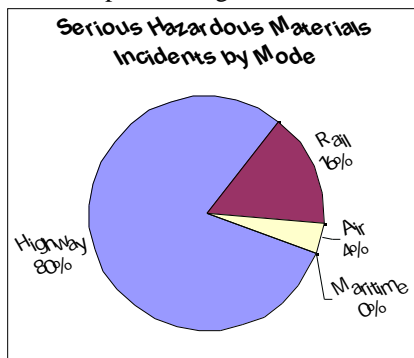
* 1999 Preliminary Data

External Factors: The vast majority of hazmat transportation incidents are caused by human error.



1999 Results: Preliminary data indicate that serious hazardous materials incidents declined from 432 in 1998 to an estimated 363 in 1999, surpassing the 1999 goal by 16 percent. While this is encouraging, it is still too early to tell whether this actually reflects the impact of DOT programs or is within the expected range of fluctuations (see above graph).

Highway incidents continued to dominate the overall number of serious hazardous materials incidents.



The number of serious hazardous materials incidents is not normalized to the number of hazardous materials shipments. RSPA estimates that in 1999, there were over 800,000 hazardous materials shipments per day. Industry appears to be placing increased focus on safety

improvements, encompassing improved packaging as well as operational and response procedures. The drop in package failure incidents may partially reflect that effort, and suggests at least one aspect of system risk reduction. Further conclusions are difficult to draw, however, and DOT continues to aggressively address risk reduction throughout the system.

In 1999, RSPA evaluated the usefulness of hazardous materials incident reports in identifying the causes of hazardous materials incidents. This study was coordinated with industry and Hazardous Materials Information System (HMIS) users. The results have been incorporated into an Advance Notice of Proposed Rulemaking to consider revisions to the incident reporting requirements and the detailed hazardous materials incident report form.

FY 2000 Performance Plan Evaluation: The number of serious hazardous materials incidents in 1999 surpassed the goals for both 2000 and 2001. Given the year to year fluctuation observed in this measure, however, it is too early to assess if a firm downward trend has been established or if the 2001 goal should be reduced.

Strategies and Initiatives to Achieve 2001 Goal: DOT develops regulations and standards for hazmat packaging and shipping, and enforces those standards for every mode of transportation. DOT will align its programs to better focus on the human factors involved in hazmat spills. In addition, it will work with the industry and state and local partners to prioritize risk factors, permitting better focus of resources on highest risk areas.

- RSPA's hazardous materials safety programs (\$19M) will continue to increase the percentage of shipper inspections conducted, compared to other types of like inspections of package manufacturers and retesters. We will address the human error problem by implementing an intensive effort to reach the hazmat community through training, technical assistance and customer service to assure it understands how to comply with Federal safety requirements. We will prioritize compliance initiatives on a risk and human factors basis. We will participate in meetings of international organizations to promote consistency between national and international hazardous materials

requirements to improve the safe and efficient transportation of hazardous materials.

- Coast Guard marine safety programs will enforce hazmat shipping regulations aboard U.S. ships and foreign ships in U.S. ports, as well as at port facilities. USCG, in conjunction with EPA, will continue to manage and operate the 24-hour National Response Center for all reporting of hazardous material releases.
- FAA will add 58 additional inspectors in FY 2001 to increase the number of inspections of dangerous goods shippers and indirect air carriers. This will allow FAA to focus increased attention on manufacturers, distributors, retailers and reshippers before their cargo reaches airports (\$3.7 million).
- FMCSA will perform Compliance Reviews and, when necessary, take enforcement action against motor carriers that pose a greater hazardous material risk, focusing on incidents/crashes, vehicle and driver violation occurrences, and company safety management breakdowns.

Management Challenge – Implementing the findings of the DOT-wide Hazardous Materials Program Evaluation Ensuring the safe transportation of hazardous materials presents a management challenge to DOT. This is because the administration of a complex national safety program requires the best that high-performance organizations can offer. Program delivery is complicated because shipments of hazardous materials frequently span modal lines of responsibility and their transportation chain can be intricate. Matters can be made better or worse by the actions of the manufacturer or shipper at the origin, where classification, packaging, and marking can be more influential on safety than the actions of any subsequent party.

Recognizing the need for systems-based analysis and action, DOT initiated a Department-wide Hazardous Materials Program Evaluation (HMPE) in 1999. Conducted by a ONE-DOT team from the OIG, RSPA, USCG, FAA, FHWA, and FRA, the effort assessed DOT's hazardous materials safety program delivery, evaluated its effectiveness at each step in the transportation process, and made appropriate recommendations. The evaluation findings to improve DOT's hazardous materials programs through DOT-wide strategic planning and coordination, more focused delivery, and better data are summarized in Appendix III, DOT Program

Evaluation, *DOT-wide Hazardous Materials Program Evaluation (DOT-wide)*.

To meet its management challenge, the program evaluation has recommended that the Secretary create a DOT-wide institutional capacity to coordinate the hazardous materials programs within DOT and implement all of the findings contained in the report. The Operating Administrations and the Bureau of Transportation Statistics will work together to improve specific program delivery and data issues following issuance of the report and adoption of the recommendations by the Secretary.

Other Federal Programs with Common Outcomes: In developing regulations for the transportation of hazardous materials, DOT works with the Environmental Protection Agency (EPA); Department of Labor, Occupational Safety and Health Administration; Department of Health and Human Services (HHS); United States Treasury, Customs Service, Alcohol, Tobacco and Firearms; Nuclear Regulatory Commission (NRC); and the Consumer Product Safety Commission.

DOT is also a member of the National Response Team (NRT). The NRT is responsible for coordinating Federal planning, preparedness, and response actions related to oil discharges and hazardous substance releases.

In coordination with the Federal Emergency Management Agency (FEMA), the NRC, the EPA, the Departments of Labor, Energy, and HHS, and the National Institute of Environmental Health Sciences, DOT periodically develops and updates a curriculum consisting of a list of courses necessary to train public sector emergency response and preparedness teams.

DIRECT SAFETY PROGRAMS

Estimated Obligations (FY 1999-2001), in millions

3/17/00

		FY 1999 Actual	FY 2000 Estimated	FY 2001 Request
OFFICE OF THE SECRETARY		1	-	-
TPR&D	(Safety projects)	1	-	-
COAST GUARD		962	908	1,008
Search and Rescue	Operations	394	345	383
	Acquisition	65	48	64
	Research	3	2	2
Marine Safety	Operations	392	401	440
	Acquisition	46	36	48
	Research	4	1	1
Boating Safety Grants		59	64	64
FEDERAL AVIATION ADMINISTRATION		954	1,031	1,101
Operations	Regulation & Certif. Comm. Space	625	651	705
Facilities & Equip.	(Safety-related projects)	193	246	255
Research	Aircraft Safety Technology	35	44	49
	Human Factors & Aviation Med.	25	22	25
Airport Grants	(Safety-related work)	16	14	61
FEDERAL HIGHWAY ADMINISTRATION		130	895	892
Fed-aid Highways	100% Safety Set-aside	631	685	719
	Safety Belt Grants	54	80	92
	Safety Incentive Grants	43	70	81
	Highway Safety Grants	2	-	-
FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION		155	181	219
Administration		55	76	92
Grants		100	105	111
RABA		-	-	10
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.		360	361	499
Operations & Research		160	160	286
Highway Traffic Safety Grants		200	201	213
FEDERAL RAILROAD ADMINISTRATION		96	111	111
Safety & Operations	(Safety-related portion)	61	70	71
Railroad R&D		19	22	26
NGHSR	(Safety-related portion)	10	19	14
FEDERAL TRANSIT ADMINISTRATION		2	5	6
Research & Technology	(Safety-related)	2	5	6
RESEARCH & SPECIAL PROGRAMS ADMIN.		65	71	81
Hazmat Safety, R&D, Program Support		29	30	34
Emergency Prep Grants		11	14	14
Pipeline Safety		25	27	33
TOTALS		3,326	3,516	3,983

STRATEGIC GOAL: MOBILITY

Shape America's future by ensuring a transportation system that is accessible, integrated, efficient, and offers flexibility of choices.

Mobility as much as any other factor defines us as a nation. It *connects* people with work, school, community services, markets, and other people. The U.S. transportation system carries over 4 trillion passenger miles of travel and 3.7 trillion ton miles of freight every year – generated by more than 260 million people and 6 million businesses. For efficiency and equity of access, our transportation system frequently relies on common public infrastructure that is maintained on limited national resources – our land, waterways, and airspace.

DOT's objective is to optimize capital investment in these public systems and manage them to maximize the benefit to all Americans. The FY 2001 budget proposes \$43 billion in direct mobility funding to meet this challenge. This is an 7.5 percent increase over 2000.

We Aim To Achieve These Strategic Outcomes:

- Improve the structural integrity of the transportation system.
- Balance new physical capacity with the operational efficiency of the nation's transportation infrastructure.
- Increase intermodal physical, information, and service connectivity.
- Increase access to the transportation system for the movement of all people and freight.
- Provide preventive measures and expeditious response to natural and man made disasters in partnership with other agencies to ensure that we provide for the rapid recovery of the transportation system.

This section includes a Performance Progress Report for 1993-1999. Alongside our 1999 results, we note if the target (goal) was met. If the goal was missed but recent data show the trend responding in a good direction, we note that important result. A detailed analysis of performance results for 1999 and our strategies and initiatives for 2001 follows the Performance Progress Report. Our discussion of Mobility concludes with a presentation of Mobility Program Direct Spending.

PERFORMANCE PROGRESS REPORT: MOBILITY

PERFORMANCE MEASURES:

Highway pavement condition
Highway bridge condition
Highway congestion
ITS integration
Runway pavement condition
Aviation system capacity
Aviation delay
All weather access to airports
Essential Air Service
Maritime navigation
Impediments to port commerce
St. Lawrence Seaway lock availability
Amtrak ridership
Transit ridership
Bus and rail transit fleet condition
Transportation accessibility

1993 1994 1995 1996 1997 1998 1999 1999 GOA GOOD

DOT Performance Plan (FY 2001) and Report (FY 1999)

MOBILITY								GOA L	L MET?	TREND?
Percent miles of NHS roads meeting pavement performance standards	88.7	89.6	90.1	90.4	91.7	91.8	N/A	91.5		✓
Percent of deficient NHS bridges	26.7	25.7	25.7	25.8	23.4	23.2	22.7	22.8	✓	
Hours of delay per 1,000 VMT on Fed-aid Highways	N/A	N/A	N/A	8.2	8.2	8.1	N/A	8.1		✓
Percent increase in level of ITS integration in 6 metro areas above 1997 baseline	N/A	N/A	N/A	N/A	N/A	N/A	37	20	✓	
Percent of runways in good or fair condition	93	N/A	N/A	93	95	95.1	95	93	✓	
Volume and equipment related delays per 100,000 flight activities	47.10	36.97	33.83	36.64	38.28	32.55	30.37	30.70	✓	
Total published Global Positioning System (GPS) airport approaches	N/A	0	44	352	937	937	1984	1953	✓	
Percent subsidized communities with at least 2 round trips/day, 6 days/week (12 round trips/week)	N/A	N/A	N/A	N/A	N/A	100	100	100	✓	
Percent subsidized communities with at least 3 round trips/day, 6 days/week (18 round trips/week)	N/A	N/A	N/A	N/A	N/A	75	75	75	✓	
Percent total operating days marine aids to navigation are available for use on U.S. waters	N/A	99.3	99.2	98.3	98.8	98.9	98.4	99.7		
Percent of ports reporting landside impediments to the flow of commerce	N/A	N/A	N/A	N/A	N/A	41	40	40	✓	
Percent of days in shipping season that locks are available	96	94	96	99	97	98	99	99	✓	
Amtrak trip time between NY and Boston (in hours)	4.75	4.75	4.75	4.75	4.75	4.75	4.75	3		
Percent Amtrak trains arriving on time	72	72	76	71	74	79	79	87		✓
Percent Amtrak customer satisfaction	N/A	N/A	81	82	84	84	82	87		
Revenue vehicle hours of service (rail and non-rail, in millions)	175	180	183	184	187	197	203	195	✓	
Percent of key rail stations ADA compliant	N/A	13	19	19	26	29	49	37	✓	
Percent bus fleet ADA compliant	50	55	60	63	68	72	77	73	✓	

N/A= Not Available

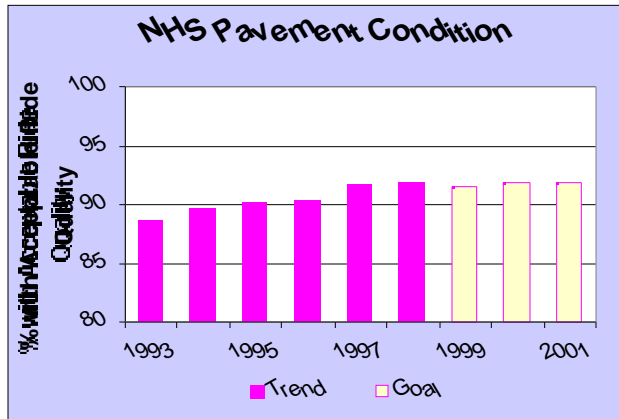
HIGHWAY PAVEMENT CONDITION: The National Highway System (NHS) consists of only 161,117 miles of rural and urban roads--just 4 percent of total highway miles--but carries 1 trillion or 43 percent of vehicle miles traveled (VMT). The system serves major population centers, international border crossings, intermodal transportation facilities, and major travel destinations. The condition of this system can affect wear-and-tear on vehicles, fuel consumption, travel time, congestion, and comfort, as well as public safety. Improving the pavement condition is also key to the long-term structural integrity and cost effectiveness of the transportation system.

Performance Goal & Result

Performance Measure: Percentage of miles on the NHS that meet pavement performance standards for acceptable ride.

Goals:	1999	2000	2001
	91.5	91.8	91.9
Actual:	Not available.		

External Factors: Growth in the U.S. economy has translated into over 2% annual growth in VMT. In addition, industry's demand for heavier and longer trucks has increased pavement deterioration.



1999 Results: 1998 data for NHS pavement condition shows that 91.8 percent of the pavement had acceptable ride quality. Since this already meets the goal set for FY 1999, we expect to be able to report that the 1999 goal was met when the 1999 data is available in late 2000.

The focus of this measure of pavement performance is smoothness. Pavement smoothness can be improved by adopting more effective construction and maintenance methods and applying "best practices" in pavement management. In 1999, FHWA began a Pavement Smoothness Initiative to get the results of Research and Development and "best practices" in pavement management to State DOT's and others involved in the construction and maintenance of highways.

FHWA is also promoting pavement preservation nationwide. This initiative will result in improved pavement smoothness and, in addition, will reduce life cycle cost. An expert task group has been formed with AASHTO and industry, to assist FHWA in developing

and implementing this initiative. A training course: "The Preventive Maintenance Concept" was prepared and has been distributed nationwide.

FY 2000 Performance Plan Evaluation: The highway pavement condition goal for FY 2000 has already been met. As a result, we considered revising the 2001 goal upward. However, because of issues related to Highway Performance Monitoring System (HPMS) data completeness and the expected effects of growing freight volume and vehicle miles traveled, we believe the 2001 target of 91.9 is still a valid goal. However, FHWA will continue to track progress and will look at making adjustments to the longer-term goal of having 93 percent of miles on the NHS meet pavement performance standards for acceptable ride quality by the year 2008.

Strategies and Initiatives to Achieve 2001 Goal:

FHWA partners with State and other authorities to promote infrastructure development and improvement through direct funding, grants, and technical assistance and advances in road construction, repair, and maintenance technology. FHWA technology deployment initiatives will ensure that advancements in pavement materials, practices and high performance materials are adopted to improve the performance of NHS pavements. Initiatives to promote construction of smoother pavements and preservation actions to extend pavement performance are also underway.

- The FHWA Federal-aid Program provides funds for projects that improve NHS pavement condition. Most of the funding for these projects comes from the NHS and Interstate Maintenance (IM) programs. Over \$4.6 billion in IM funds and over \$5.5 billion in NHS funds will be obligated in FY 2001.
- The FHWA asphalt pavement technology program focuses on optimizing materials selection to maximize the cost-benefits ratio associated with pavement. This program is funded at \$4.5 million in 2001. Benefits include reduced maintenance, better ride quality, increased pavement life and reduced life cycle cost.
- FHWA will conduct pavement research (other than SUPERPAVE) (\$16 million) and continue the Long Term Pavement Performance Program (LTPP) (\$10 million). Total funding for pavement research will

increase by over 40% from FY 2000. Planned activities include (1) improving methods of using concrete pavement for highways, (2) monitoring and evaluating highway sections to prepare new products, (3) measuring pavement ride quality and smoothness, and (4) investigating new techniques to analyze, image, and simulate asphalt pavements.

- FHWA, in cooperation with the States and the Industry, will publicize the results of the Pavement Smoothness Initiatives. Presentations will be made at regional and national meetings. Videotape presentations have been produced. A promotional display has been prepared promoting the benefits of smoother pavements and best practices for building and preserving them. The display will be used to aid in promoting these practices at technology fairs, State paving conferences and trade shows.

Other Federal Programs with Common Outcomes:

None.

HIGHWAY BRIDGE CONDITION: The National Highway System (NHS) includes 128,979 bridges serving major population centers, international border crossings, intermodal transportation facilities, and major travel destinations. Approximately 23 percent of these bridges are either structurally deficient or functionally obsolete (in terms of dimensions, load or other characteristics). Deficient bridges impair the public's access to activities, goods, and services.

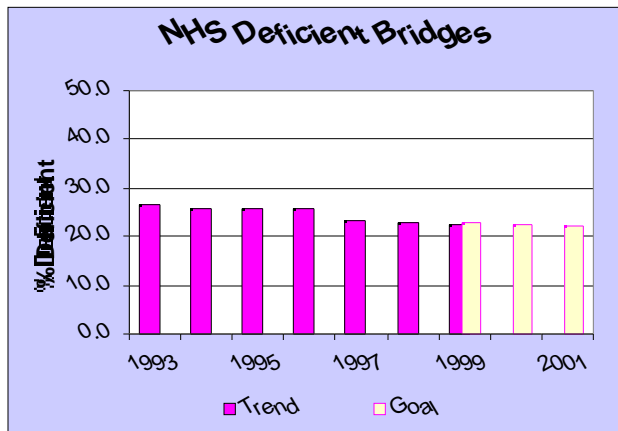
Performance Goal & Result

Performance Measure: Percentage of bridges on the NHS that are deficient.

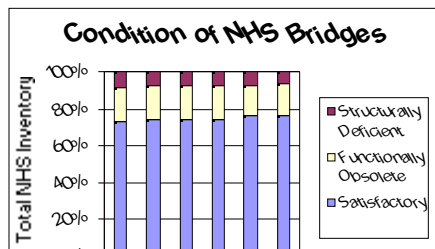
Goals:	1999	2000	2001
	22.8	22.5	22.3
Actual:	22.7*		

* Preliminary 1999 data

External Factors: Growth in the U.S. economy has translated into over 2% annual growth in vehicle miles traveled, increasing the stress on bridges. In addition, the 4 percent growth rate of combination truck traffic over the 1985 through 1995 period exceeded that for all types of vehicles by .7 percent. These trends directly contribute to structural and functional deterioration of our bridges.



number of deficient NHS bridges to 22.8%. According to preliminary NBI data for 1999, this goal was met. From 1996 to 1998 the percentage of deficient NHS bridges decreased from 25.8% to 23.2%, with a 2.4 percentage point drop between 1996 and 1997. Much of this single-year drop was due to criteria changes for bridge functionality, which resulted in the one-time reclassification of a number of deficient bridges as non-deficient. This reclassification was developed in coordination with state highway officials. The long-term rate of improvement in the Nation's bridge inventory is expected to follow historical trends, and



settle out to about 0.4% yearly by 2003.

Analysis of the data reveals steady progress in reducing the number of structurally deficient bridges, but a general upward trend in functional obsolescence (disregarding the drop between 1996 and 1997 due to criteria changes). Geometry and capacity influence bridge functional obsolescence. When a bridge width or load carrying capacity is insufficient for the traffic carried, the bridge is functionally obsolete. The slight increase in functional obsolescence is partially explained by the number of interstate bridges in the inventory that are beginning to become deficient. The FHWA will focus research and technology innovations on ways to make transportation investments buy more and last longer.

In order to meet our objectives for pavement and bridge improvements, FHWA will leverage research to foster major advances in the technology of road and bridge construction, repair, and maintenance. FHWA technology deployment initiatives will ensure that current advancements such as SUPERPAVE and high performance materials (composites), as well as high performance steel and high performance concrete are adopted to improve the performance of highways and bridges. The pavement and bridge management systems will enhance the ability of States, local agencies, and Federal land agencies to assess, maintain, and improve the condition of pavements and bridges.

Activities relating to bridge condition. In 1999, solicitation packages were sent to the FHWA field offices requesting assistance in identifying candidate bridge projects for the construction portion of the Innovative Bridge Research and Construction program. Applications were received from 50% of the states. In 1999, funds were provided for 56 projects in 40 different states. These projects were selected based on their potential to demonstrate the application of innovative material technology in bridge construction.

In FY 1999, Discretionary Bridge Program candidates were solicited from all of the States for FY 2000. Forty-seven applications were received, from 24 States, with a total requested amount of funding of \$934 million; \$108 million was actually allotted. For FY 2000, \$87.1 million was available for the Discretionary Bridge Program. Ten candidates were selected for funding, of these, two were seismic retrofit projects.

The American Association of State Highway and Transportation Officials (AASHTO), in cooperation with FHWA continued the VIRTIS project to develop software to load-rate bridges. The initial modules for steel bridge and pre-stressed and reinforced concrete bridge assessment were completed. The integration of VIRTIS and PONTIS will assist states in planning the systematic preservation, management, and improvement of bridge conditions.

FY 2000 Performance Plan Evaluation: Based on program performance in FY 1999, the targets established for FY 2000 of reducing the number of deficient bridges are on track and we anticipate that they will be reached.

Strategies and Initiatives to Achieve 2001 Goal: DOT will provide funding to States for bridge replacement and rehabilitation. In addition, current regulations will be reviewed and recommendations provided, where feasible, to increase flexibility in the use of bridge funds for system preservation initiatives. DOT will work with States and other partners in both the public and private sector to improve management of bridge assets. FHWA will focus research on improving the technology of bridge construction, repair, and maintenance. FHWA technology deployment initiatives will ensure that advancements in high performance materials and seismic retrofit techniques are adopted to improve the performance of bridges.

- The FHWA Federal-aid Highway programs provide funds for projects that improve the condition of NHS and non-NHS bridges. Most of the funding for these projects comes from the NHS and Bridge Programs. \$5.5 billion (3.2% increase over 2000) in NHS and \$3.9 billion (3.1 % increase over 2000) in Bridge program funds will be obligated by States in FY 2001.
- The Surface Transportation Research program provides durable structural materials, nondestructive evaluation technologies for condition assessment in support of bridge management, and technical assistance all of which lead to extended bridge service life. A total of \$14.3 million is requested for these activities in FY 2001.
- Innovative bridge research supports the deployment of innovative materials which are more durable and resistant to traffic loads and corrosive attack, resulting in less maintenance and traffic restriction. The innovative bridge construction program, funded at \$20.9 million, demonstrates the application of innovative materials on selected bridges.

- FHWA will conduct an in-depth assessment of the barriers to effective bridge management. The initiative will review, evaluate, and issue a Notice of Proposed Rulemaking to revise current FHWA regulation (23 CFR 650 Subpart D), policy, and guidance to support use of bridge management systems to prioritize the use of bridge replacement and rehabilitation funds.

Other Federal Programs with Common Outcomes:
None.

HIGHWAY CONGESTION: Congestion is one of the main causes of frustration and unhappiness for users of the highway system. Delay on the Nation's highway systems is a major cost to motorists - amounting to \$51 billion annually in lost wages and wasted fuel. It has even more serious consequences for national productivity. Congestion adds to the cost of production, drives prices up, and reduces funds available for investment in product development or firm expansion. Reducing delay will improve the mobility and productivity of all system users, increase national productivity and better position American firms in the world economy.

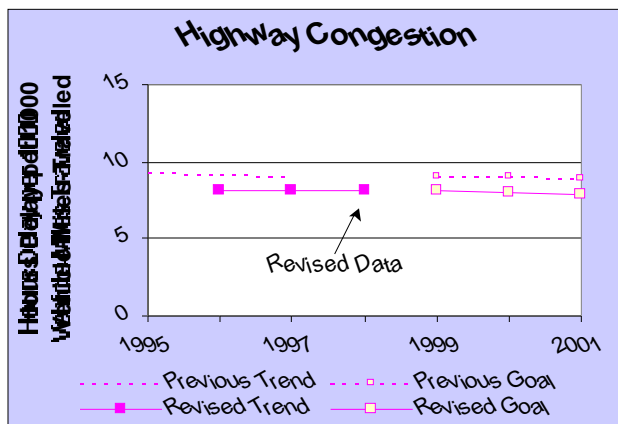
Performance Goal & Result

Performance Measure: Hours of delay per 1,000 vehicle miles traveled on Federal-aid highways.

Goals:	1999	2000	2001
Original:	9.1	9.0	8.9
Revised:	8.1	8.0	7.9
Actual:	Not available		

Note on Revised Data: The estimate of delay has been recomputed for the period 1996 through 1998 using a revised set of base assumptions. The data for years preceding 1996 has been dropped from the analysis of trends. Although the rebased trend line reflects a lower absolute value of delay, it is now more consistent with other capacity and delay-related data from the Highway Performance Monitoring System (HPMS).

Prior to 1996 we did not have usable data from all States for every year, and trend analysis used data sets that included FHWA-imputed values for a number of variables. From 1996 on, the analysis of trends reflects State-reported data values only. In addition, procedures were changed in the 1994 Highway Capacity Manual that redefined capacity on higher order systems.



External factors: Same mileage has increased at an annual rate of .2 percent from 1987 to 1997, while highway travel has increased at an annual rate of 2.9 percent for the same period. To the extent that the travel increase occurred at peak periods, increased congestion is a result of this disparity.

1999 Results: Our revised goal for improving the operation of the highway systems in 1999 was 8.1 hours of delay per 1,000 vehicle miles traveled (VMT).

Congestion in 1998 had already been reduced to 8.1 hours of delay per 1,000 vehicle miles traveled (VMT) meeting the 1999 target.

Although hours of delay per 1,000 vehicle miles traveled on all Federal-aid highways (urban and rural) is going down, studies indicate that mobility in urban areas is getting worse. Recent analysis of urban mobility by the Texas Transportation Institute shows the average increase in delay per driver for all 68 urban areas studied was 181 percent between 1982 and 1997 and 29 percent between 1992 and 1997. Only five urban areas (Brownsville, Hartford, Honolulu, San Francisco-Oakland and San Jose) in the study showed no increase in delay per driver between 1992 and 1997, but these areas did have increases in delay per driver over the long-term (between 1982 and 1997).

One of the most visible indicators of highway operational problems and a major cause of delay is the delay and frustration drivers' experience in work zones. The most recent National Quality Initiative survey found the delay associated with work zones to be the leading irritant associated with various forms of congestion (rush hour, toll booth, incidents, volume based, etc.).

Snow, rain, fog and other inclement weather also contribute to delay by temporarily reducing the capacity of many road systems. It has been estimated that the cost of a one-day highway shutdown due to snow is between \$15 million and \$76 million in lost time, productivity, and wages. Hazardous driving conditions also increase the number of crashes further contributing to delay and, more critically, fatalities and injuries.

Historically the Department improved national mobility and productivity by increasing, rebuilding, or otherwise enhancing the physical highway infrastructure. The focus has now shifted to improving the operations and efficiency of our surface transportation system by deploying an integrated electronic and communication infrastructure, i.e., the Intelligent Transportation System. Because of the importance of ITS deployment to the Department's overall mobility strategy, a separate goal for ITS deployment has been established (see page 55). A detailed discussion of 1999 results and planned initiatives is included in the ITS goal page.

While ITS deployment aims to improve the overall operation of the highway system, actions were also taken to mitigate other factors that impact highway congestion. The Office of the Federal Coordinator for Meteorology formed a joint action group called Weather Information for Surface Transportation and FHWA initiated a project to document surface transportation weather information requirements. FHWA also developed and distributed work zone management tools to improve efficiency and reduce construction duration as well as the exposure of construction workers and the public to traffic hazards.

FY 2000 Performance Plan Evaluation: Based on program performance in FY 1999, we expect to maintain the level of congestion at the 1998 level despite expected increases in VMT and meet the recalibrated goal in the FY 2000 performance plan.

Strategies and Initiatives to Achieve 2001 Goal: DOT implements a wide range of strategies to address congestion and improve operations on the highway transportation system. Key strategies include continuing to invest in the long-term goal of deploying the ITS infrastructure; investing in tools for increasing the capacity of the existing system; and improving land use planning. DOT also provides funds to state and local agencies to promote investment in transportation infrastructure. Transportation demand management, transit projects, and bicycle-pedestrian projects, as well as highway projects, can be funded. The National Highway System Program provides funds for improvements for interstates, major arterials and connections to intermodal transportation facilities (\$5.5 billion in FY 2001) and the Surface Transportation Program provides funds for projects on any Federal-aid highway, transit capital projects, bus terminals and intermodal projects (\$6.4 billion in FY 2001). In 2001, the FHWA will:

- Provide funding through the ITS program to deploy an integrated electronic and communication infrastructure to enable or enhance operations (e.g., freeway management, signal control, incident management, value pricing, traveler information, emergency response, weather response management) across the United States. More detailed information on FY 2001 initiatives and funding levels are included in the "Strategies and FY 2001 Initiatives" for the ITS Integration goal page.
- Invest \$8.2 million to develop tools that can be used by system managers to improve the operation of the existing system and to measure the success of selected strategies including:

- Publish the final Manual on Uniform Traffic Control Devices (MUTCD) rule and conduct a nation-wide outreach, training and education effort to communicate the new standards. The MUTCD is the standard for signs, signals and markings, which is one of the most basic methods used to manage and control the operation of our street and highway system.
- Develop a work zone module for the Interactive Highway Design Model to help evaluate traffic control plans and estimate the cost of user delay associated with construction options so that those costs could be weighed against the cost associated with various construction and contracting techniques.
- Develop and test a winter maintenance decision support system for system managers and road weather information systems for travelers.
- Develop best practice guidelines for systematic, integrated surface transportation operations including arterial and freeway management systems, travel demand management systems, and operational aspects of value pricing.
- FTA's Livable Communities Initiative and Planning activities will provide alternatives to vehicle travel by including transit in the early stages of community planning.

Other Federal Programs with Common Outcomes:
None

INTELLIGENT TRANSPORTATION SYSTEMS INTEGRATION: Highway congestion is a persistent problem, and opportunities to build new roads or expand existing roads have declined substantially. Intelligent Transportation Systems (ITS) use electronic information and communications technology to extend the capacity of our existing infrastructure system – examples are freeway management, traffic signal control, electronic toll collection, transit management, and regional multimodal traveler information. But while deployment of ITS is beneficial, piecemeal purchase and installation of technology create artificial system boundaries. The challenge to Federal, State, and local transportation officials is to integrate these systems so that the nation can realize all the potential benefits associated with ITS.

Performance Goals & Results

Performance Measure: Percentage increase in the level of Intelligent Transportation System (ITS) integration in 6 metropolitan areas above 1997 baseline. This measure pertains to 1999 only.

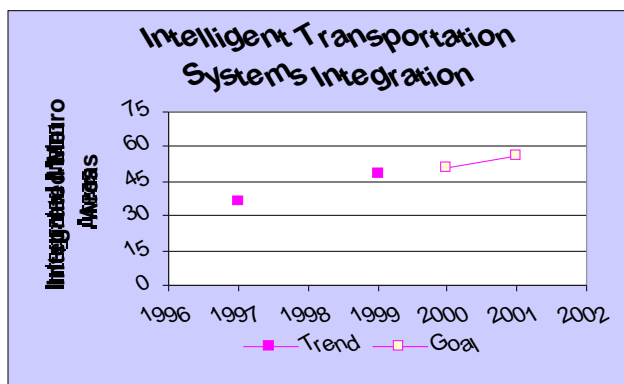
Goals:	1999	2000	2001
	20%	#	#
Actual:	37%		

Performance Measure: Number of metropolitan areas where integrated ITS infrastructure is deployed.

Goals:	1999	2000	2001
	--	51	56
Actual:	48		

Discontinued measure in DOT plan after 1999.

External Factors: Significant control over ITS deployment resides at the local level and stove-piped ITS deployments that are not regionally integrated are still occurring. This could make future ITS integration more difficult, thus limiting potential benefits.



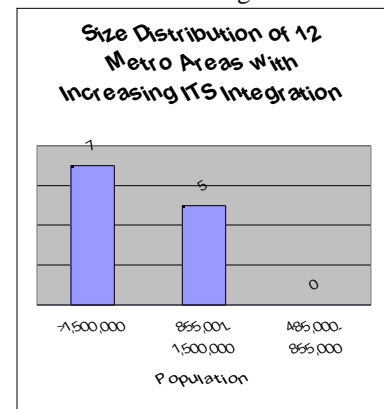
1999 Results. The 1999 goal of increasing the level of ITS integration in six metropolitan areas by at least 20% over the 1997 baseline was exceeded. A comparison of the integration levels for 1997 against the levels of integration for 1999 indicates that the level of integration increased by at least 37% in the following six metropolitan areas: San Antonio, TX; Greensboro, NC; Seattle, WA; Minneapolis, MN; Phoenix, AZ; and Cincinnati, OH. Furthermore, the following six metropolitan areas also exceeded the 20% increase in

integration: Baltimore, MD; Orlando, FL; Richmond, VA; Salt Lake City, UT; Washington, DC; and West Palm Beach, FL. This is a preliminary report based on a survey response rate of 81%. The data are being reviewed and validated. Final results are expected by June 2000.

Overall, these 12 areas experienced a 34% increase in integration. The highest levels of integration increase occurred among arterial and freeway management components (54%) followed by freeway and transit management components (30%) and arterial and transit management components (16%).

These 12 areas were concentrated in the largest metropolitan areas in the nation.

Seven have a population over 1,500,000; five have a population between 855,001 and 1,500,000; and none have a population between 485,000 and 855,000.



In 1999, several activities contributed to achieving this goal. The Metropolitan Model Deployment Initiative funded integration efforts in the Seattle, WA and San Antonio, TX metropolitan areas. Other federal-aid funding supported the implementation of integration in many areas throughout the nation. Training and technical assistance programs conducted by the U.S. DOT provided assistance to communities in developing plans and programs to foster integration of systems across jurisdictions.

ITS program assessment activities during 1999 included the conduct of a nationwide survey of system integration and deployment. Surveys were distributed to a total of 75 of the nation's largest metropolitan areas for the purpose of comparing 1999 levels of integration and deployment with 1997 levels.

When looking at the largest 75 metropolitan areas in the nation, the largest one-third had an average integration increase of 13% in 1999, the next largest one-third had an average integration increase of 11%, and the smallest one-third had an average integration increase of 4% in 1999.

FY 2000 Performance Plan Evaluation: For the FY 2000 and beyond, an improved performance measure has been adopted for this goal. This measure utilizes the same information collected from the FY 1997 and FY 1999 surveys but tracks the number of metropolitan areas where integrated ITS infrastructure is deployed. Early indications are that the FY 2000 goal will be met.

Strategies and Initiatives to Achieve 2001 Goal: DOT strategy for integrating intelligent transportation systems into the nation's surface transportation system is (1) to implement a program of research and technology transfer activities, (2) to provide policy guidance and technical support needed to achieve integrated deployment of ITS, or (3) to utilize an incentives program that supports the integrated deployment of metropolitan ITS infrastructure. To support this effort, a record level of investment, \$338 million, is requested for ITS in FY 2001, 83% above the FY 2000 enacted level. Specifically, \$120 million for ITS deployment will be evenly distributed in a three-pronged approach to accelerate deployment. Regional Model Deployment (\$40 million) will expand existing systems beyond metropolitan boundaries and integrate systems between metropolitan areas. Commercial Vehicle Information Systems and Networks (CVISN) Deployment (\$40 million) will streamline the commercial vehicle regulatory process for goods movement. Rural Deployment (\$40 million) activities will focus on automatic crash notification, weather and road condition information, and coordination of rural transit services. Planned FY 2001 initiatives include the following:

- The Travel Management and Advanced Public Transit System research and operational test programs (\$8.67 million) will complete efforts to develop adaptive control systems, state-of-the-art transit fleet management algorithms and new ITS planning tools.
- Development of the initial 80 ITS standards will be completed, and testing will be completed on one-half of the ITS standards. Enhancements in the intermodal area will be undertaken.
- DOT will provide for a Regional Model Deployment Program (\$25 million). This effort – a follow-up to the highly successful Metropolitan Model

Deployment Program – will demonstrate how integration can take place on a statewide basis between adjacent metropolitan areas or between States.

- A policy requiring ITS projects funded through the Highway Trust Fund to conform to the National ITS Architecture and applicable standards will be implemented as called for in section 5206(e) of TEA-21. Funding (\$15 million) for Regional Architecture Development Grants will support implementation of this policy in cities nationwide.
- The ITS Integration Support Program (\$11.08 million) will assist those engaged in the planning, design, implementation and operation of the integrated ITS infrastructure.
- The Metropolitan part of the ITS Integration Program funded by TEA-21 provides \$83 million for state and local applicants to use in integrating metropolitan area travel management intelligent infrastructure.

Other Federal Programs with Common Outcomes:

The Environmental Protection Agency has been working cooperatively with the Federal Highway Administration in efforts to better understand the impacts of Intelligent Transportation Systems deployments on the environment.

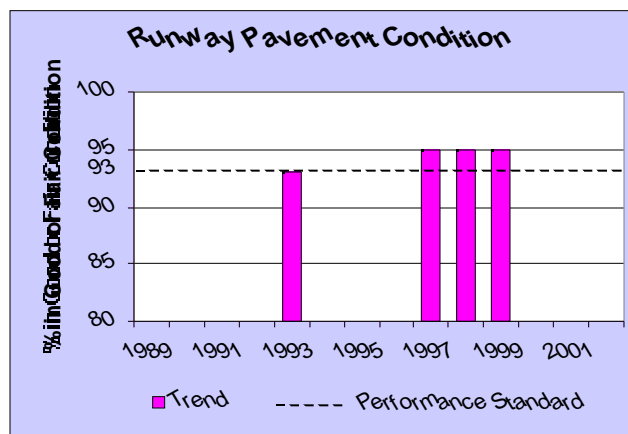
RUNWAY PAVEMENT CONDITION: Deteriorated airport runway pavement can damage propellers, turbines and airplane landing gear. Proper design, construction, and maintenance can slow this deterioration, but runways still need complete rehabilitation every 15 to 20 years. This means that during a typical year, 5% to 7% of runways require rehabilitation. Federal airport funding helps achieve this necessary level of rehabilitation, and—combined with proper maintenance—helps keep runway condition at or above the minimum level needed to ensure efficient airport operation.

Performance Goal & Result

Performance Measure: Percent of runways in good or fair condition (commercial service, reliever, and selected general aviation airports).

Goals:	1999	2000	2001
	93%	93%	93%
Actual:	95%		

External Factors: Runway rehabilitation is among the highest priorities of FAA's Airport Improvement Program (AIP), but projects must be initiated by airport operators who pay a portion of the cost. The availability of grants for rehabilitation may detract from regular maintenance programs, which are usually funded entirely by the airport operator.



1999 Results: The goal of maintaining over 93 percent of runway pavement in good or fair condition was met in 1999. 95% of the runways at airports included in the National Plan of Integrated Airport Systems (NPIAS) were reported in good or fair condition. At NPIAS airports with commercial service, 98% of runways were in good or fair condition.

State aviation agencies made increasing use of computer-based pavement management systems to predict when pavement maintenance and rehabilitation are needed and most likely to be cost effective. These measures enhance the effectiveness of state and federal expenditures on airfield pavement.

The National Pavement Test Facility was completed at the William J. Hughes Technical Center. This will enable

FAA to conduct full-scale tests of aircraft landing gear configurations on test pavement sections to obtain data to improve pavement design and construction.

In FY 1999 the FAA issued 210 grants for about \$297 million to help rehabilitate runways. In addition, a 3-year Pavement Maintenance Pilot Program involving six states was completed. Under this Program, about \$1.2 million in AIP funds were used to pay for routine pavement maintenance at 52 non-primary airports. This program was the first under AIP to participate in costs other than capital planning and development. It focused on lower activity airports that might otherwise have been unable to pay for cost effective preventative maintenance. The pilot program was successful and the FAA proposed legislation for a permanent program

External Factors influencing this goal in 1999 include air carrier flight operations at commercial service airports, which have increased by 5% over the past 5 years. More frequent operations can increase wear on runway pavement and shorten the time predicted between construction and rehabilitation.

FY 2000 Performance Plan Evaluation: Based on program performance in FY 1999, we expect to meet the performance standard for this goal again in FY 2000. The FAA expects to issue about 200 grants for runway rehabilitation. Grants will also be available for routine work to preserve and extend the useful life of runways, taxiways, and aprons at non-primary airports.

Strategies and Initiatives to Achieve 2001 Goal: Since maintaining and rehabilitating runways costs less than total reconstruction of runways, FAA has focused on requiring AIP grant recipients to show evidence of an airport pavement maintenance management program and on changing the AIP to include routine pavement maintenance as an eligible activity.

- FAA will continue to give requests for runway rehabilitation a high priority in 2001. FAA estimates that approximately 200 runways will be rehabilitated with AIP aid in 2001. The availability of AIP funds for this purpose will have the most immediate influence on runway pavement condition. (\$150-\$200 million)

- AIP funds will be available for pavement maintenance at non-primary airports.
- FAA will continue research to refine pavement design to accommodate new larger aircraft that will impose very heavy wheel loads on pavement (\$2.0 million).
- In response to a provision in the AIP reauthorization legislation, the FAA will transmit to Congress a report evaluating options for improving the quality of information on airfield pavement conditions.

Management Challenge – Airport Revenue Diversion

A significant challenge to the FAA is ensuring the appropriate use of airport funds. FAA initiated and is pursuing a vigorous program of enforcement actions to ensure compliance with relevant Federal requirements. FAA implemented all the revenue use provisions of the Federal Aviation Reauthorization Act of 1996, issued a comprehensive policy statement, and issued an advisory circular instructing airports on the filing of annual reports to the FAA. FAA is using FAA-sponsored outreach forums; appearances at conferences and seminars conducted by airport industry trade associations and regional, state and local aviation organizations; and similar venues to educate airport sponsors about their Federal obligations regarding proper use of airport revenue. Local government airport sponsors are required to review airport revenue use as part of their annual audit of Federal programs under the Single Audit Act. FAA, working with the Office of Management and Budget and the General Accounting Office, has issued detailed guidance to auditors on the conduct of those reviews. Enforcement actions may include withholding of grants under the Airport Improvement Program.

Other Federal Programs with Common Outcomes:

None

AVIATION SYSTEM CAPACITY: Air travel is steadily growing. The number of passengers has grown 25% from 1993 to 1998 and air carrier operations have grown 13% from 1993 to 1998. In anticipation that these growth rates will continue, it will be necessary to increase capacity at the 50 busiest hub airports to accommodate future growth.

Performance Goal & Result

Performance Measure: System capacity attributable to airport infrastructure at the 50 busiest airports.

Goals:	<u>1999</u>	<u>2000</u>	<u>2001</u>
	*	#	#

Actual: No improvement over baseline

* 0.5% above 1998 baseline

Discontinued measure in DOT plan after 1999

1999 Results: The 1999 goal of increasing 0.5% above the 1998 baseline was not met. Three major runways were under construction in Philadelphia, Phoenix and Seattle, but none were commissioned and opened to traffic during FY 1999. New runways are expected to be commissioned in Phoenix and Philadelphia in 2000, increasing the capacity of the busiest 25 airports by about 0.3%. Runways will be under construction in Seattle and Minneapolis, but these will not be completed during FY 2000.

This measure was a first attempt at monitoring the effectiveness of FAA activities to increase runway capacity and relieve delay at congested airports, particularly through grants under the Airport Improvement Program. The measure is being refined as information is compiled regarding the distribution and severity of delay and the prospects for new runways, which must be planned and undertaken by airport operators.

Computer simulation was completed for 14 airports in 1999, providing reliable and comparable estimates of annual capacity and the expected increase in capacity where new runways are planned. Eleven more airport computer simulations will be conducted in 2000, completing the analysis to benchmark the capacity of the 25 busiest airports.

AVIATION DELAY: Commercial aviation delays are estimated to cost the airlines over \$3 billion a year. Passengers are directly affected by the inconvenience of delays in terms of missed flight connections, missed business meetings and loss of personal time. There are approximately 20 congested airports, each with an estimated average annual delay of over 20,000 hours. With demand for passenger travel increasing each year, delays throughout the system are projected to increase.

Performance Goals & Results

Performance Measure: FAA Volume- and equipment-related delays per 100,000 flight activities.

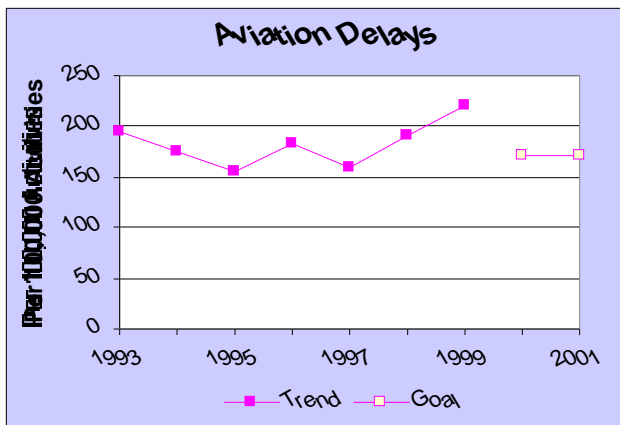
Goals:	1999	2000	2001
	30.70	#	#
Actual:	30.37		

Performance Measure: Aviation delays per 100,000 activities.

Goals:	1999	2000	2001
	#	171	171
Actual:	220		

The measure for Aviation Delay was changed after 1999 to include all causes of delay, including weather.

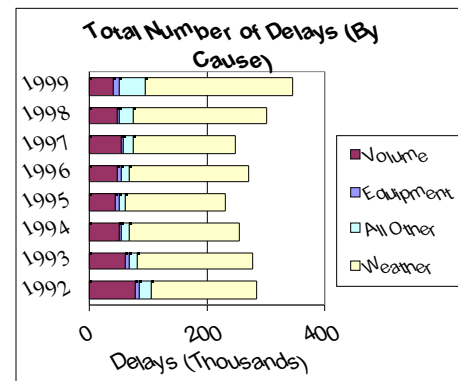
External Factors: Due to the air traffic density and the amount of adverse weather, capacity constraints at large hub airports lead to delays throughout the National Airspace System (NAS). As traffic increases further throughout the system, delays are likely to increase. Consequently, maintaining the current delay rate represents a significant accomplishment.



1999 Results: In FY 1999, the rate of volume and equipment-related delays was 30.37 per 100,000 flight activities, which exceeded the FAA goal of 30.70 or less. However, when weather delays are included, the rate of aviation delays per 100,000 activities increased to 220 from about 200 in 1998.

The 1999 results follow a multi-year trend of generally diminishing volume and equipment delays. (Equipment delays have increased, but when combined with volume, there is an overall decrease.) These results may be due to a number of FAA initiatives. The Air Traffic Control System Command Center (ATCSCC) has placed increased emphasis on honoring commitments to aircraft, helping to eliminate the practice of "no notice holding." Collaborative Decision Making (CDM) was begun in 1997 and continues to be used in ground delay programs. The National Operations Control Center (NOCC) located within the ATCSCC was established in January 1999. The NOCC collaborates daily with Traffic Management to ensure NAS equipment services are available for use. A primary focus of NOCC is delay mitigation when the issue is FAA equipment. The increased dissemination (within 24 hours) of written maintenance alert information contributes to reduced equipment delays by preventing similar events that stem from a common cause.

Some of the decrease in volume and equipment delay may also be attributed to a change in the method for reporting volume-related delays in 1997 which reclassified some volume delays as weather delays. The change to a new performance measure in FY 2000, which includes all causes of delay including weather, will eliminate problems related to misclassification.



Most aviation delay and variance in delay is the result of weather. In FY 1999, bad weather accounted for about 69% of all delays. This is a 13% increase over 1998. While FAA initiatives to improve weather prediction and flight routing can serve both to improve safety and to reduce delays, the FAA's ability to manage weather delays is more limited, and aviation safety will always be the foremost concern in air traffic control.

FY 2000 Performance Plan Evaluation: For FY 2000, the performance measure has been expanded to address all causes of delay, including weather. Our assessment of FY 1999 aviation delays indicates that the FY 2000 target should be achievable with the current mix of strategies and initiatives unless the U.S. experiences unusually bad weather conditions. One of the initiatives expected to help in meeting the 2000 goal is the replacement of existing computer processing hardware for the central complex in 20 enroute centers and 3 oceanic centers. The Host and Oceanic Computer System Replacement (HOCSR) provides faster processing of data, and improved reliability and supportability. The improved processing capability will allow Air Traffic Control to deliver flight plans and reroute information in a more timely manner thus reducing delay times.

Strategies and Initiatives to Achieve 2001 Goal: FAA strategies to reduce delays include NAS improvements, better weather reporting systems, and defining air passenger priorities. A critical element of what we do is to give controllers the tools they need to efficiently manage air traffic.

- FAA is implementing air traffic automation enhancements in Free Flight Phase I. By the end of 2001, the Traffic Management Advisor will be installed and operating in seven centers; collaborative decision making tools will be fully developed and operational; the User Request Evaluation Tool will be installed and operating at three centers; and seven Surface Movement Advisor systems will be operational at airport traffic control towers. (\$170.8 million)
- Existing controller workstations are being upgraded to run enhanced software (Display System Replacement). New equipment will improve system reliability and allow the new software to be added to existing controller automation tools. (\$136.8 million)
- Improved modeling of airspace capacity, development of better algorithms, completion of prototype development, and evaluation of new equipment for collaborative decision making with users will lead to new tools to improve traffic flows. (\$21.7 million compared to \$9.7 million in 2000)
- FAA is developing two major systems to improve weather reporting, processing, and dissemination. The Integrated Terminal Weather System will consolidate information from several sources, which is provided to airport towers. The Weather and

Radar Processor will report weather information and integrate weather radar data provided to the FAA centers. (\$40.1 million compared to \$36.7 million in 2000)

- In support of the two programs above, FAA is continuing to implement and improve existing weather sensors such as the NEXRAD weather radar, Terminal Doppler Weather Radar, Low Level Wind Shear Alert System, a wind shear detection channel for the terminal radar, and the Automated Surface Observing System. (\$45.5 million)
- FAA's weather research program for 2001 will be developing a fog prediction model to better forecast when visibility will be adequate for airport operations and an enhanced wake turbulence monitoring system for San Francisco Airport and support for wake turbulence programs at other airports. (\$2.5 million compared to \$1.2 million in 2000)

Management Challenge – ATC Modernization

The FAA is engaged in a comprehensive program to modernize the air traffic control system. This includes replacement of the controller workstations and automation software; replacement of radar surveillance systems; modernization of voice communication systems; and the introduction of enhanced automation aids, data link, and improved weather systems. This modernization is necessary to keep pace with improvements in technology and to accommodate air traffic growth. There are significant management challenges associated with maintaining schedule and cost discipline, given the complex nature of the equipment and the need for the highest levels of reliability. FAA is addressing these challenges through a number of initiatives in 2001:

The FAA's Acquisition Management System is being used to award contracts promptly, reducing administrative costs, and ensuring that potential contractors are likely to meet cost and schedule goals. All major projects are now baselined, so that progress against planned performance can be measured. FAA is using Earned Value Management for appropriate new large acquisition projects.

Other Federal Programs with Common Outcomes: NASA has developed enhanced software tools for air traffic control in partnership with FAA.

In addition, the National Weather Service (NWS) has developed the Collaborative Convective Forecast Product (CCFP). This product is utilized several times

each day to forecast significant meteorological disturbances that could affect NAS traffic flow.

FAA's aggressive aviation weather research program, in collaboration with National Weather Service (NWS) and other government agencies, is investing in improved numerical weather models to provide more detailed and timely hazardous weather detection and forecasting. Improved icing, turbulence, oceanic convection, and a national ceiling and visibility forecast program provide the tools for improved flight planning and collaborative decision making. The further development of the aviation gridded forecast system provides for tailored, route-specific flight planning for safer, more efficient operations.

ALL WEATHER ACCESS TO AIRPORTS: There are nearly 4,000 public use airports with paved runways in the U.S. Currently, about 600 of these airports have an instrument landing system (ILS) for precision approaches. These approaches enhance safety by providing guidance (both horizontal and vertical) to aircraft and improve access to airports by allowing landings when visibility is limited. Because many airports have more than one runway, the total number of runways with precision landing guidance (which includes altitude guidance) is about 1,080. With the availability of GPS, augmented by the Wide Area Augmentation System (WAAS) and/or barometric vertical navigation, there is now the opportunity to increase the number of runways where a vertically guided approach is possible.

Performance Goals & Results

Performance Measure: Total number of published GPS airport approaches.

Goals:	1999	2000	2001
	1,953	2,453	#

Actual: 1,984

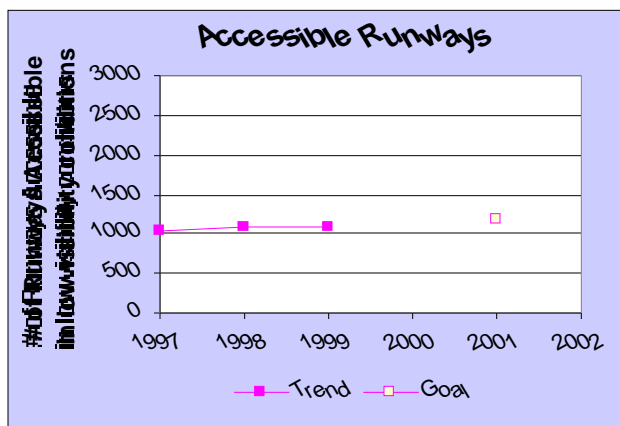
New Performance Measure: Number of runways that are accessible in low visibility conditions.

Goals:	1999	2000	2001
	#	#	1,191

Actual: 1,084

The measure for Access to Airports was changed after 2000 to more accurately measure the outcomes of FAA actions.

External Factors: Developing the approaches requires accurate survey information for airport runway location and any obstacles near the flight path for approach. These surveys are done by the National Geodetic Survey. Increasing all weather access depends on both having a published approach and increasing the number of aircraft equipped to make precision approaches. To maximize the benefits to aviation users, FAA will need to develop approaches for all qualifying airports that do not currently have electronic aids to support an instrument approach, and aircraft not presently equipped will need to install a WAAS receiver.



goal of 500 approaches, and resulted in a total of 1,984 approaches nationwide, which exceeded the 1999 goal of 1,953 published GPS airport approaches.

FAA's objective is to improve access to airports using vertically guided approaches. The number of published Global Positioning System approaches is one measure of improved user access. Although it may be impossible to measure the exact benefits because there are no towers at many of the smaller airports, increased schedule reliability for commuters and air taxis, as well as improved access for all of general aviation, will result from increasing the number of published approaches.

FY 2000 Performance Plan Evaluation: Based on program performance in FY 1999, we expect to achieve the goal set in the FY 2000 performance plan.

Strategies and Initiatives to Achieve 2001 Goal: To increase all weather access to airports, FAA is focusing on increasing the number of GPS approaches and providing pilots with the information to fly vertically guided approaches.

- FAA's WAAS program will fund the development of the approaches. Information is generated specific to the airport location, and an "approach plate" is published which gives the altitudes and path to the runway for the approach. (\$14.0 million)
- The WAAS provides accuracy and integrity information that is necessary to fly precision approaches. Initial WAAS operational capability is planned for 2001, with two communication satellites providing position corrections. FAA will continue development of WAAS to full operational capability including software and hardware upgrades to the operating system. (\$97.0 million)

Management Challenge – Civil GPS

A critical element in improving all weather access to airports is providing correction information for the basic GPS signal. This allows GPS to be used for precision approach guidance. In addition to augmenting the GPS signal, FAA must develop the specific procedures and flight path information for

each approach. However, development of the Wide Area Augmentation System has fallen behind schedule and production of new approaches has been slowed by limited resources. FAA faces management challenges in solving the performance issues with WAAS to ensure that WAAS has the necessary reliability for use as a precision guidance aid. To meet these challenges, FAA will take the following actions:

- Establish a panel of satellite navigation experts, termed the WAAS Integrity Performance Panel (WIPP), to identify the changes necessary for the WAAS to achieve the FAA's integrity requirement and to identify a plan for WAAS to achieve the end-state level of service; and
- Upon completion of the WIPP efforts, meet with aviation associations to advise them of the results and obtain their opinion of the feasibility of continuing the development of WAAS to provide the end-state level of service.

To judge their progress in resolving issues with WAAS and sustaining momentum on other key elements of increasing all weather access, FAA has set the following goals:

- Complete the WIPP efforts by December 2000.
- Meet with aviation association by February 2001 to discuss results of the WIPP effort.
- Develop an updated WAAS project schedule by April 2001.

Other Federal Programs with Common Outcomes:

The basic enabling technology for precision approaches is the GPS satellite navigation system developed and maintained by DOD. Map information will be obtained from NOAA. The Office of National Geodetic Survey will be conducting the airport surveys.

ESSENTIAL AIR SERVICE : An important aspect of the 1978 deregulation of the airline industry was establishing an Essential Air Service (EAS) program to guarantee over 700 eligible communities at least some minimum level of continuous air service. Under the EAS program, the Department subsidizes an air carrier to provide scheduled air service only if no carrier is willing to provide the service subsidy-free. Presently, 75 communities in the continental U.S., Hawaii, Puerto Rico, and the U.S. territories (“non-Alaska”) receive subsidies, and 27 more in Alaska. Service needs at the Alaskan communities are unique, are determined on a case-by-case basis, include cargo as well as passenger, and thus are difficult to measure. Therefore, the performance measures shown below pertain only to non-Alaskan communities.

Performance Goals & Results

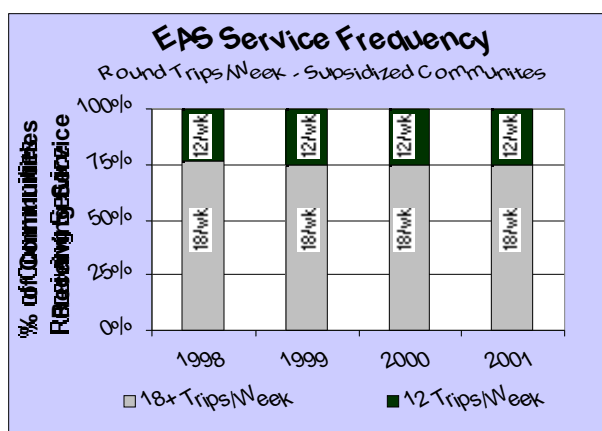
Performance Measure: Percent of subsidized communities with at least 2 round trips/day, 6 days/week (12 round trips/week).

Goals:	1999	2000	2001
	100%	100%	100%
Actual:	100%		

Performance Measure: Percent of subsidized communities with at least 3 round trips/day, 6 days/week (18 round trips/week).

Goals:	1999	2000	2001
	75%	75%	75%
Actual:	75%		

External Factors: The backbone of the EAS program for the past decade has been pressurized 19-seat aircraft. For a number of reasons, this aircraft size is being phased out of many airlines’ fleets and being replaced with larger, more costly aircraft. The increasing cost of both aviation fuel and labor will challenge our ability to



subsidize 3 round trips/day, 6 days/week at 75% of the subsidized communities. Labor unrest can also prevent goal achievement.

1999 Results: 75 communities received subsidized air service out of the 500+ non-Alaskan eligible communities. All 75 communities received at least 2 round trips/day, six days/week. In addition, 56 of those 75 received at least 3 round trips/day, 6 days a week.

Airlines tell us that more than 2 round trips/day are needed to maintain a viable market. Thus DOT met its goal of having 75% of the subsidized communities receive the higher level of service. In addition to excluding the 27 Alaskan communities, this 1999 performance data also excludes 3 non-Alaskan communities whose unique service frequency needs and geographic situation were addressed individually.

In FY 1999, out of the EAS Program’s \$50 million annual budget, contracts totaling \$45 million were entered into with air carriers to provide essential air service at 102 communities in the U. S. and its territories. Beyond just subsidizing service, DOT also aggressively contacted other carriers to alert them to the market opportunity opening up whenever an existing carrier reduced or eliminated service to an eligible community.

FY 2000 Performance Plan Evaluation: Based on performance in FY 1999, we expect to achieve the goal set in the FY 2000 performance plan.

Strategies and Initiatives to Achieve 2001 Goal: In order to make it easier for airlines to participate in the EAS program, DOT will use the Internet to issue “Requests for Service Proposals.” The \$50 million annual EAS budget will maintain at least the minimum guaranteed level of scheduled air service (12 round trip/week) at those communities in the continental U.S. and its territories that meet these criteria:

- are beyond 70 highway miles from the nearest large or medium hub airport, and
- do not require a subsidy of more than \$200 per passenger. (The subsidy criterion does not apply if the community is beyond 210 miles from the nearest large or medium hub airport.)

Other Federal Programs with Common Outcomes: None.

MARITIME NAVIGATION: Over two billion tons of domestic and foreign commerce is transported through U.S. ports and waterways every year. As larger volumes of maritime and recreational vessel traffic squeeze U.S. port capacities, navigation accidents involving commercial vessels can impact cargo throughput, and may even force closure of major waterways. These accidents also may cause serious damage to ships and navigation channels, putting people, other ships, and the environment at risk.

Performance Goals & Results

Performance Measure: Percentage of total operating days that marine aid to navigation are available for use on U.S. navigable waters. (This measure was discontinued in the DOT plan after 1999. The Coast Guard still tracks it.)

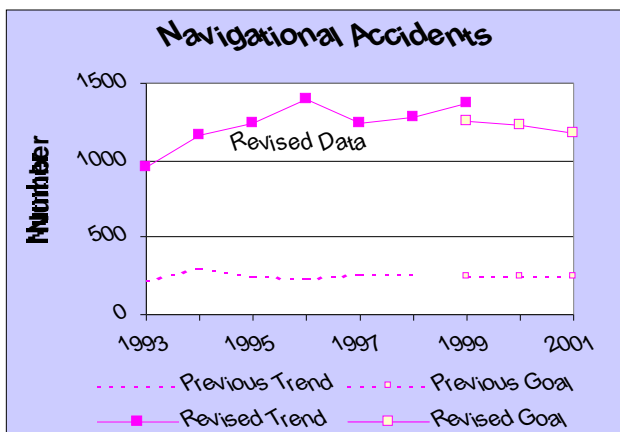
Goals:	1999	2000	2001
	99.7%	--	--
Actual:	98.4%		

Performance Measure: Total number of navigational accidents -- maritime collisions, allisions and groundings.

Goals:	1999	2000	2001
Original:	N/A	246	241
Revised:	N/A	1224	1199
Actual:			
Original:	257*		
Revised:	1377*		

* 1999 preliminary results are shown for both original and revised measure

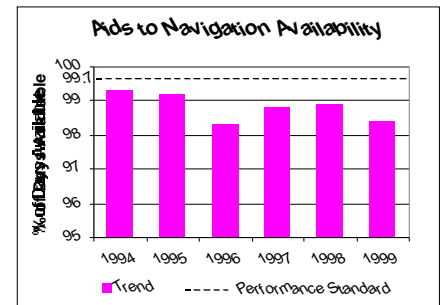
Note on Revised Data: Beginning this year, the measure of navigation accidents has been revised to capture more incidents and provide a more accurate picture of vessel traffic. The original 2000 target for collisions, allisions and groundings was 246. That converts to 1224 using the new methodology. This represents the same proportional reduction that our programs were aiming for in the



provides the previous trendline and goals for comparison.

External Factors: Collisions, allisions and groundings are strongly affected by human error on the part of those piloting the ships. Faster, larger, deeper draft vessels will pose a greater risk of navigational accident. Also, severe weather can degrade an aids to navigation system over a wide area, disrupting efficient navigation.

1999 Results: Our 1999 goal targeted only navigational aid performance. We did not meet our goal for maintaining navigation aid availability days at 99.7% of all days. The final results were 98.4%. An aid is not considered available when some function – it's light, whistle, horn, or physical location is not correct. Storms, floods, equipment breakdowns, and damage sustained when ships collide with the aids caused outages that reduced availability.



The trend in availability has been

mixed over the past years, but it has been consistently lower than the goal target. The 99.7% target was set to correspond with International Association of Lighthouse Authorities standards for aid availability. However, in real practice, falling short of the 99.7% standard does not necessarily mean that maritime mobility suffered. Even when one function such as a light stops working, an aid's whistle, or location still provide information to mariners. Mobility is only hampered when a whole system of aids is disabled (in a hurricane, for example.)

FY 2000 Performance Plan Evaluation: For FY 2000, the primary measure for maritime navigation will be collisions, allisions, and groundings. This is a higher-level outcome measure related to efficient navigation. Aid availability will still be tracked as a management indicator at the program level.

Our first report and analysis on the new measure is due in next year's FY 2000 Performance Report. Preliminary data show 1377 incidents in FY 1999.

Meeting the FY 2000 target of 1224 accidents will prove difficult. Between focusing on human error and improving the navigation information available to mariners, we believe we have the tools to begin decreasing the number of collisions, allisions, and groundings. However, because this count of incidents is not normalized to exposure, it does not provide a sensitive indicator of changes in risk.

Strategies and Initiatives to Achieve 2001 Goal: The Coast Guard operates and maintains a national aids to navigation (ATON) system and provides Vessel Traffic Services (VTS) in select ports. The Coast Guard also develops national and international standards for vessel navigation, manning, and crew qualifications; and enforces these standards.

Reducing human error will be the major focus. Coast Guard will also manage higher risk waterways using Vessel Traffic Services, providing time-sensitive traffic safety information and intervening where necessary. New technology will be used to improve navigation. In FY 2001, the Coast Guard will:

- Operate and maintain a fleet of buoy tenders, construction tenders, icebreaking vessels, and a system of radionavigation aids to navigation.
- Replace its aging seagoing buoy tenders with modern state of the art vessels that will enable the Coast Guard to more efficiently maintain ATON. (\$123.7 million).
- Provide support and operate a standardization team to increase the ATON readiness, proficiency, and safety of a fleet of new 49-foot Buoy Boats. (\$854,000)
- Modernize the waterways aids to navigation infrastructure to support and maximize the utility of the Corps of Engineers dredging projects. (\$4.7 million)
- Continue to improve navigation services provided to the maritime community through the Maritime DGPS service.
- Establish Automatic Identification System (AIS) based VTSs where there is a compelling Federal interest (\$8.1M)
- Revise navigation equipment carriage requirements to accommodate newly available technology. Participate in development of technical and performance standards for emerging navigation technologies.

- Support national components of the Marine Transportation System (MTS) coordination structure - Interagency Committee for the MTS and the National Advisory Council.
- Encourage formation of Harbor Safety Committees (HSC) - the local component of MTS coordination for problem solving at the local level.
- Field risk-based decision support tools (Ports and Waterways Safety Assessments, Waterways Evaluation Tool, etc) for local HSC use.
- Continue to oversee the alteration or removal of bridges determined to be unreasonable obstructions to navigation, under the Truman-Hobbs Act. Funding will be made available from the Federal-Aid Highway Discretionary Bridge Program.
- Assess the integration of numerous data bases and cargo tracking systems in order to improve the information coordination and sharing in the Marine Transportation System.

Other Federal Programs with Common Outcomes:

The Army Corps of Engineers dredges channels to maintain charted depth and width. The Army Corps and NOAA provide navigation charts of U.S. ports and waterways. NOAA provides weather information to ships. The National Transportation Safety Board investigates major maritime accidents; USCG participates in these investigations, and independently investigates less serious accidents to determine cause and evaluate trends. Using these investigations, the Coast Guard and NTSB cooperate on identifying and implementing strategies to reduce future accidents.

IMPEDIMENTS TO PORT COMMERCE: Ports play an essential role in the U.S. economy. Today, over two billion tons of goods produced or consumed in the United States move through our Nation's ports and waterways; however, this volume is expected to more than double over the next 20 years. Increased bottlenecks will potentially degrade the efficient intermodal movement of goods through our ports without improvements to inland rail, highway, and truck intermodal connections, as well as waterside port access improvements.

Performance Goals & Results

Performance Measure: Percentage of ports reporting landside impediments to the flow of commerce.

Goals:	1999	2000	2001
	40%	39%	37%

Actual: 40%

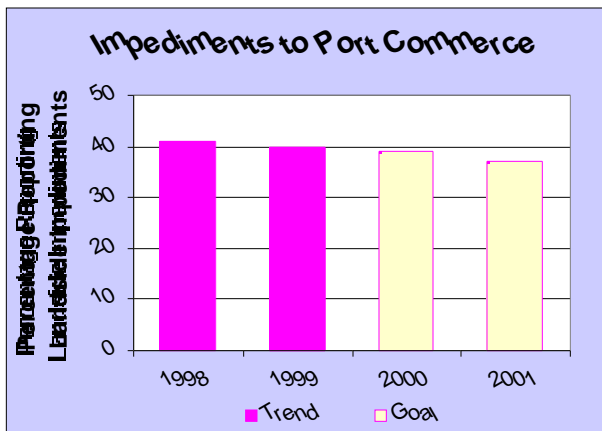
Performance Measure: Percentage of ports reporting land- and waterside impediments to the flow of commerce.

Goals:	1999	2000	2001
	N/A	N/A	TBD

Actual: N/A

Note: Starting in 2001, the scope of the performance measure will be expanded to include both land- and water-side impediments at deep water and shallow draft ports. A goal for the new measure will be ready by August 2000.

External Factors: Challenges include steady growth in waterborne foreign trade, infrastructure constraints, environmental concerns, institutional and land-use barriers, and national security demands. Inadequate navigation improvements and maintenance projects on a timely basis will limit the ability of the most modern, cost-effective ships in the world fleet to call at U.S. ports. Differences between U.S. and international standards for freight transport also present a challenge in achieving this goal.



deepwater ports and terminals (including the top 50

U.S. ports, the top 25 container ports and the 14 strategic ports, with some ports in more than one category) reported landside access impediments to the flow of commerce. This meets the goal and compares to a baseline-weighted average of 41% in FY 1998.

The following key impediment areas were identified by those ports which reported impediments: 1) rail access (69% reported this problem); 2) truck access (63%); and, 3) highway access (51%). Primary examples of rail access impediments encountered were at-grade crossings, inconvenient location of rail yards, inefficient on-dock rail access, need for additional rail spurs, and rail service issues and competition. The main truck access impediment cited was limited or lack of truck access routes to ports and marine terminals. Other truck access impediments were inadequate street signs and tight turning radii for trucks. Noticeable examples of highway access impediments included narrow and old bridges, congestion, and inadequate interstate and local highway access routes to ports and marine terminals.

DOT developed new and expanded existing partnerships with Federal agencies and private entities to begin to advance maritime freight transportation in accordance with the objectives of the new Marine Transportation System (MTS) initiative and TEA-21 provisions. An MTS Task Force produced a report to Congress that provided a current status of the MTS and specific recommendations to improve it. This document will serve as a framework for future improvements to the MTS.

Under the Transportation Equity Act for the 21st Century (TEA-21, Section 1106(d)), the FHWA is evaluating the National Highway System connections to intermodal terminals. This evaluation is expected to provide DOT with solutions that will help to improve highway connections to our nation's ports. The study will be completed in the spring of 2000.

FY 2000 Performance Plan Evaluation: MARAD is continuing to focus on landside access to U.S. deepwater ports in FY 2000. In order to meet the FY 2000 target, MARAD will continue to support existing public-private partnerships to improve cargo handling, develop more efficient maritime systems including the marine-rail interface concept and improve

interoperability with rail and highway systems for real-time data management and transfer of information.

Strategies and Initiatives to Achieve 2001 Goal: In FY 2001, DOT, in conjunction with other Federal, regional and local government entities and users of the Marine Transportation System (MTS) will work to incorporate multi-modal, land- and waterside impediment reduction activities into transportation planning:

- MARAD will sponsor the newly chartered MTS National Advisory Council. This council will directly advise the Secretary of Transportation on all issues related to the MTS (\$500 thousand).
- MARAD, along with its Federal and private partners, will pursue implementation of MTS Task Force recommendations to: 1) develop a coordinated approach to address land- and waterside access to ports; 2) assure that regional, state, and local planners consider integrating the MTS into the overall local, state and regional transportation system; 3) investigate the potential effectiveness of the Intelligent Transportation System to improve marine transportation efficiency and capacity; and, 4) continue to implement DOT strategic actions to address the safety of at-grade crossings.
- FRA will seek to reduce the number of railroad grade crossings throughout the United States. While aimed primarily at safety benefits, this will also help reduce delays for both vehicles and trains around seaports.
- The Coast Guard, MARAD and RSPA will join to coordinate activities, develop modeling techniques, and conduct research through the new University Maritime Transportation Grants (UMT) Program, to improve the MTS (\$2.5 million in the RSPA budget). The UMT program will advance U.S. marine transportation technology and expertise through education, and research and technology transfer at university centers of excellence. The research will focus on long-term, multi-modal solutions.
- The Coast Guard, working through the Captain of the Port, will continue to regulate the location of vessel anchorages by balancing the needs of the different users with safety concerns.

Other Federal Programs with Common Outcomes: MARAD will continue to work with other federal agencies involved in the National Science and

Technology Council's "Enhanced Gateway" Initiative. The objective is to develop and implement strategies that will alleviate specific impediments to the flow of commerce identified by the initiative.

MARAD will also continue to improve the flow of commerce at the Nation's ports by working closely with industry organizations, Federal partners, and the International Maritime Organization to pursue the adoption of uniform international and domestic standards for the maritime industry.

DOT is also an active participant in the National Dredging Team, led by the U.S. Army Corps of Engineers (USACE) and EPA, to improve the dredging process in the United States.

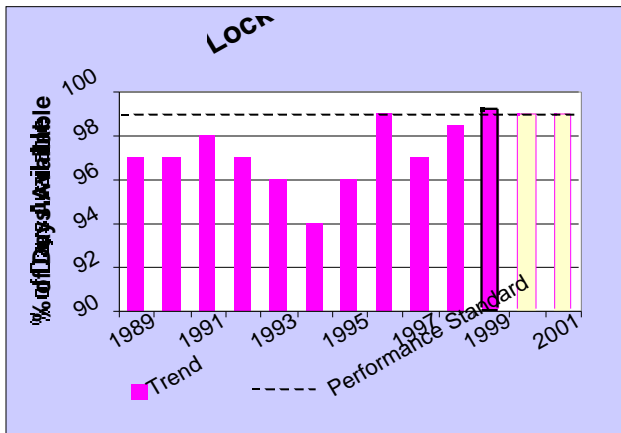
ST. LAWRENCE SEAWAY LOCK AVAILABILITY: The St. Lawrence Seaway is the international gateway to the Great Lakes, providing access for 3,141 commercial vessel transits in 1999 (and an estimated 36.5 million metric tons of cargo) to and from U.S. and Canadian ports. This shipping route offers competitive costs with other routes and modes to the interior of the country, helping to increase U.S. exports and facilitating economic access to imports. The U.S. Department of Transportation and Transport Canada share responsibility for operation and maintenance of the Seaway locks and related navigation facilities. The reliability of each lock determines the reliability of the system as a whole.

Performance Goal & Result

Performance Measure: Percentage of days in the shipping season that locks are available.

Goals:	1999	2000	2001
	99%	99%	99%
Actual:	99.2%		

External Factors: Several external factors may affect performance including vessel incidents due to human error and mechanical failure; and weather conditions (poor visibility, high wind, or ice formation). Water levels and the rate of flow in Lake Ontario and the St. Lawrence River are subject to weather and binational



regulation.

1999 Results: In 1999, the availability for vessel locks maintained and operated by the Saint Lawrence Seaway Development Corporation (SLSDC) was 99.2 percent, surpassing the 1999 goal of 99 percent. These results were slightly higher than 1998 (98.5 percent) and the five-year average (1994-1998) of 97.5 percent.

An analysis of the factors that caused lock non-availabilities in 1999 indicates that the most common cause is weather. These weather delays usually occur at the beginning and end of each navigation season, and are caused by high winds, blizzards, and dense fog that cause a hazard to vessels and lock personnel. The other two major factors that caused lock non-availabilities in 1999 were vessel incidents and vessel breakdowns. Vessel

incidents involve ship operations, and are usually caused by human error on the part of a vessel's crew. Vessel breakdowns are caused by mechanical problems with a vessel. While neither of these factors is directly under the control of the SLSDC, the SLSDC is taking steps to address these factors. The SLSDC has joined with its Canadian counterpart, as well as the U.S. and Canadian Coast Guards, to institute a joint boarding program for the foreign vessels that use the Seaway. The SLSDC is also developing a Automatic Identification System (AIS)-based Vessel Traffic Management System (TMS) that is based on the Differential Global Positioning System (DGPS) technology. The application of Universal AIS technology should enhance the efficiency of Seaway operations, improve the safety of navigation on the Seaway, and reduce vessel incidents when it is implemented in 2001.

Of the remaining factors that cause lockage shutdowns, the Corporation has the most control over the proper functioning of lock equipment. During the 1999 navigation season, only 1.25 hours of the 50.5 total hours of downtime were due to malfunctioning lock equipment.

FY 2000 Performance Plan Evaluation: Based on program performance in FY 1999, we expect to achieve the goal set in the FY 2000 performance plan.

Strategies and Initiatives to Achieve 2001 Goal: SLSDC strategies for FY 2001 focus on long-term preventive maintenance programs, including periodic inspections; winter shutdown maintenance program; emergency response simulations and training, and replenishment of reserves for emergencies and critical maintenance outlays.

- The SLSDC is proposed as a Performance Based Organization (PBO) consistent with legislation submitted during the first session of the 106th Congress. For 2001, \$13 million is estimated as the mandatory SLSDC funding from the Harbor Services Fund. This funding together with miscellaneous other revenues will finance SLSDC 2001 activities.

- The SLSDC will operate and maintain the locks and related navigation facilities for the U.S. portion of the St. Lawrence Seaway. FY 2001 emphases will include:
 - periodic inspections and surveys of locks and machinery;
 - channel sweeping and maintenance dredging;
 - mitre gate rehabilitation at the Snell Lock;
 - implementation of lock structure improvement programs as recommended by the U.S. Army Corps of Engineers;
 - investment in special maintenance projects to ensure aging infrastructure remains up-to-date and reliable; and
 - binational initiatives in maximizing draft.
- The SLSDC will survey port operators in the Seaway System to assess customer satisfaction with the quality of service provided.
- The SLSDC will continue coordination with its Canadian counterpart agency to ensure consistency in the vessel inspection procedures of the two agencies and to implement AIS/GPS technology by providing real time 2-way ship-to- ship, ship-to-shore, and shore-to-ship communications.

Other Federal Programs with Common Outcomes:

The Canadian Saint Lawrence Seaway Management Corporation (SLSMC) carries out counterpart programs. SLSDC engages in information exchanges with the U. S. Army Corps of Engineers, which operates locks on U.S. inland waterways, and the Panama Canal Commission; and close coordination with the International Joint Commission and St. Lawrence Seaway River Board of Control.

AMTRAK RIDERSHIP: Intercity rail passenger service helps to reduce highway and aviation congestion in many areas of the U.S. It can help decrease the need for more highway and aviation infrastructure, reduce air pollution, and decrease our use of energy resources. But passenger rail service is capital intensive, and the many public benefits cannot be fully captured in individual rider fares. Ridership growth is a key component in achieving Amtrak's financial viability.

Performance Goals & Results

Performance Measure: Amtrak trip time between NY and Boston.

Goals: 1999 2000 2001
 3 hrs. # #

Actual: 4.75 hrs.

Performance Measure: Percentage of Amtrak trains arriving on time.

Goals: 1999 2000 2001
 87% # #

Actual: 78.5%

Performance Measure: Customer satisfaction index.

Goals: 1999 2000 2001
 87% # #

Actual: 82%

Performance Measure: Number of intercity and commuter trains scheduled along the most congested segments of the Washington/Boston Corridor.

Goals: 1999 2000 2001
 ---* # #

Actual: 332

Performance Measure: Intercity ridership (millions of passengers).

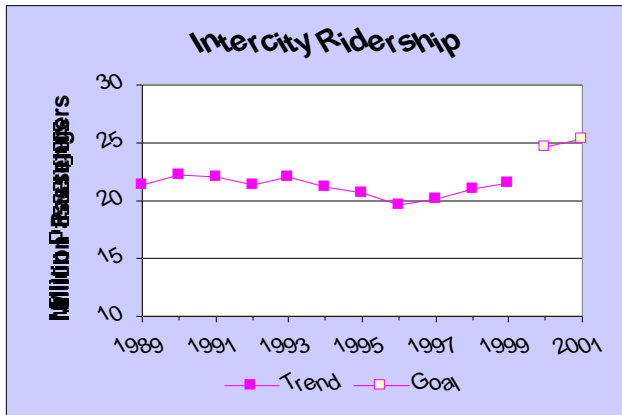
Goals: 1999 2000 2001
 N/A 23.7 25.3

Actual: 21.5

Replaced with broader ridership measure after 1999. The individual measures will be included in FRA's Performance Plan.

** No goal set for 1999; 2005 goal is to increase to 365 trains/day*

on-time performance (and customer satisfaction) on lines congested by freight trains.



1999 Results: Although the FY 1999 goals for trip time between NY and Boston, on-time arrivals and customer satisfaction were not met, ridership levels rose significantly marking the third consecutive year of impressive increases for Amtrak. The performance is especially encouraging, as it relates to future traffic growth, because it occurred during a year when train schedules were cut back to accommodate heavy construction associated with the completion and testing of all components of electrifying the New Haven, CT/Boston, MA portion of the Northeast Corridor. Amtrak started all-electric operations on January 31, 2000. With this critical step accomplished, Amtrak can now concentrate on the completion of all tests of the new high-speed Acela trainset. Failure to achieve the 3-hour trip time goal in FY 1999 was primarily caused by the inability to complete testing and delivery of the Acela high-speed trainsets. It is now expected that high-speed all-electric operations with the Acela trainsets will begin during the summer of 2000.

Amtrak system-wide on-time performance was 78.5 percent for FY 1999, slightly below the FY 1998 level of 78.6 percent. This did not meet the FY 1999 goal of 87 percent on-time performance. Extremely bad weather and added freight congestion were contributing factors in not meeting the target. Amtrak directly controls train operations only on the NEC (Washington, DC to Boston, MA), the most significant market under 400 miles. For the remainder of its markets, those under and over 400 miles, train operations are controlled by the freight

External Factors: Amtrak is a for-profit corporation. DOT must work to ensure that Amtrak balances the conflicting pressures of generating short-term cash, long-term revenues and restoring Amtrak's aging infrastructure. Outside of the Northeast Corridor, commercial railroads own both rights-of-way and operating systems. This can create problems in achieving

railroads that own the rights-of-way. On these lines, Amtrak trains are sometimes delayed by normal freight train operations and less often by emergencies relating to freight operations. These events are outside of Amtrak's control. To successfully reach its goal of on-time performance, the most important factor will be the performance of long distance trains, which must improve dramatically. Amtrak and the freight railroads are working together to improve service.

On a system-wide basis Amtrak reported a Customer Satisfaction Index (CSI) of 82 for FY 1999. The CSI is partially influenced by Federal investment in the fixed plant, as well as by renewed management focus on providing superior services.

Among Amtrak's three Strategic Business Units (SBU), the most improved customer satisfaction has been in the NEC with a five-point gain in 1999 from 1998. Because NEC traffic accounts for over one-half of Amtrak's total ridership, improvements in its CSI bolster system-wide performance. Planned upgrading of NEC services beginning in early 2000, particularly high-speed all-electric operations between NYC and Boston and the deployment of new trainsets throughout the corridor, will help ensure that recent trends in the corridor's CSI will continue.

A total of 332 intercity and commuter trains were scheduled along the most congested segments of the Washington/Boston corridor in 1999. Amtrak and the commuter agencies operating on the NEC continue to make satisfactory progress in undertaking the infrastructure improvements necessary to accommodate the projected growth in the use of the NEC main line. FRA does not anticipate any problems in achieving the 2005 goal of 365 trains per day.

In FY 1999, Amtrak invested \$150 million in the rehabilitation of coaches and locomotives and the purchase of new equipment. These investments will combine to make train operations more reliable on the Corridor, and reduce the frequency of equipment failure throughout the Amtrak network.

FY 2000 Performance Plan Evaluation: With the initiation of high-speed all-electric service in the northeast corridor on 1/31/2000, Amtrak expects to meet its revised goal of 23.7 million riders in FY 2000.

Strategies and Initiatives to Achieve 2001 Goal: DOT aims to achieve its Amtrak ridership goal through continued capital investment in the Northeast corridor, and a substantial new investment (\$468 million) to expand intercity rail passenger service nationwide.

- DOT's FY 2001 capital investment in Amtrak (\$521 million) will serve to reduce the profound effects of past under-capitalization which have forced Amtrak to forego ridership/revenue building opportunities and incur long-term costs that could have been avoided through proper capital investment.
- Amtrak will complete corridor testing of the new high-speed trainsets during FY 2000 following successful construction, testing and commissioning of the electric power system between New Haven and Boston, MA. Full revenue service on this route is scheduled for summer 2000.
- For FY 2001, DOT requests a total of \$468 million for capital investments to improve passenger rail service, including improvements necessary for high-speed rail passenger service and other increases in average speeds through rail infrastructure improvements. Funds will be provided to Amtrak and/or a State or consortium of States and will be used to acquire equipment, construct infrastructure improvements including acquisition of right-of-way, and for planning and design, including \$1 million for administrative expenses related to mandatory Environmental Impact Statements and other analyses.

Management Challenge – Amtrak Financial Viability

The 1997 Amtrak Reform and Accountability Act (ARAA) mandated that Amtrak develop a plan to eliminate its need for Federal operating support by Fiscal Year 2003. Amtrak is making progress toward its goal of operating self-sufficiency by 2003, but still faces significant management challenges toward reaching this goal, and the next two years are critical.

For the first time in the corporation's history, Amtrak has increased ridership for three consecutive years—ten percent since 1997. In 1999, Amtrak increased its commercial revenues by 16 percent. Meeting the operating self-sufficiency goal can only be achieved by continuing this ridership growth and increase in revenues, a significant management challenge.

DOT is committed to supporting Amtrak as it progresses toward operating self-sufficiency. High-speed service in the Northeast Corridor and improvements to intercity passenger rail service nationwide – both detailed in the FY 2001 Strategies and Initiatives -- are key investment strategies that DOT fully supports. We expect Amtrak's financial performance to continue to improve as a result of the

introduction of the *Acela* Regional service on January 31, 2000, and *Acela Express* service on the Northeast Corridor later this year. Additional actions planned for FY 2001 include:

- DOT will provide evaluation and support for its expanded intercity rail passenger service rail initiative.
- DOT will support Amtrak as it develops its Strategic Business Plan. One particular challenge is the establishment of funding partnerships with states to develop higher speed and high-speed service in intercity corridors nationwide.

Other Federal Programs with Common Outcomes:
None.

TRANSIT RIDERSHIP: Public transit offers many benefits: it is one of the safest ways of traveling, it relieves road congestion, and it mitigates air pollution. However, these benefits will not be gained unless people decide to use public transit and leave their cars at home.

Performance Goals & Results

Performance Measure: Revenue vehicle hours of service (rail and non-rail, in millions).

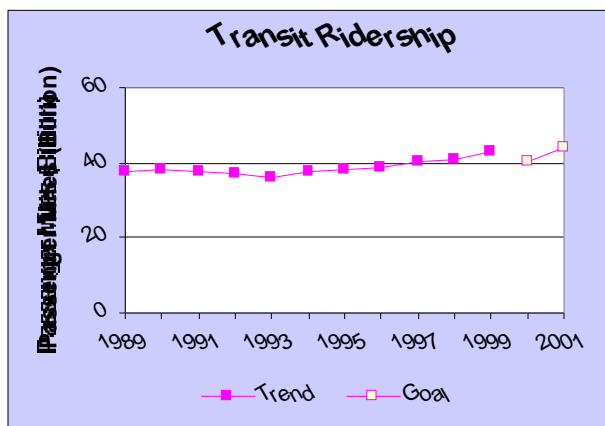
Goals:	1999	2000	2001
	195	--- #	--- #
Actual:	203		

Performance Measure: Passenger-miles traveled (in billions) by transit.

Goals:	1999	2000	2001
	---	40.56	43.97
Actual:	43.10		

Replaced with broader ridership measure after 1999.

External Factors: Our communities are spreading farther away from the central cities, and jobs are increasingly located in the suburbs. This creates longer commutes and more scattered travel patterns. Rural areas and small communities are shifting from an agricultural to a service and manufacturing economy, creating a demand for public transportation. As more women enter the labor market, a larger share of workers will need to travel to childcare centers as well as work locations. All these factors will challenge traditional



transit systems.

1999 Results: The 1999 goal of 195 million revenue vehicle hours of service for both rail and non-rail transit was exceeded. Transit ridership and service levels continue to grow, as recent capital investments and system improvements bear fruit. The capital investment levels provided in recent years have been adequate to allow transit operators to maintain the physical

conditions of the transit infrastructure and make modest increases in the amount of transit service provided.

Revenue vehicle hours represent the availability of transit or supply, but not necessarily the use of transit. Thus, FTA is changing its measure to one based on transit service consumption, measured by the number of passenger miles traveled.

Further growth in ridership is expected as the substantial increases in Federal funding under TEA-21 are translated into new investment. Rail transit ridership growth has been particularly strong reflecting recent expansions in the Nation's urban rail networks, through both new systems and expansions of established systems. New procurement and refurbishment of transit vehicles has improved the level of service provided on the expanding routes, as vehicle miles have increased at a greater rate than route miles. Transit passenger mile growth has been stronger still, meaning that, even with the recent expansions in transit route mileage and transit vehicle mileage, transit vehicles are carrying more passengers, thus making better use of the capacity which they have. Annual transit passenger miles now exceed the goals set for 2000 and 2001.

One important factor in the increase in transit travel has been the overall strength of the economy, particularly in central business districts. While most job growth has been in suburban locations, central cities have also seen an increase in employment, and transit is particularly well suited for commuter travel to central business districts. Indeed, transit passenger mile growth in urban areas in recent years has been on par with and even exceeded urban auto passenger travel.

Another important factor in improving transit capacity utilization has been improvements in system management, such as the introduction of unlimited-ride weekly and monthly passes. By reducing the incremental cost associated with a particular transit trip to zero, such passes encourage transit usage for short, discretionary trips (such as for shopping or leisure) that would otherwise be made by taxi or private auto, in addition to transit's usage by commuters. The combination of a fixed fee and no additional per-ride cost encourages high-volume usage by transit riders, making transit a lifestyle choice rather than simply an occasional convenience, enabling urban residents to limit their auto

usage while maintaining an active, productive, mobile lifestyle.

FY 2000 Performance Plan Evaluation: Based on program performance in FY 1999 and a continuing strong economy, we expect to exceed the goal set in the FY 2000 performance plan.

Strategies and Initiatives to Achieve 2001 Goal: FTA provides grants to states and localities to develop new transit systems and extend existing systems, and provides transportation planning to ensure that public transit systems are accessible, convenient, and well managed. FTA also works to improve the safety of public transit so that it will offer a viable alternative to automobile travel.

- FTA will invest more than \$6.1 billion (5% above FY 2000 level) in the transit infrastructure. Some of these funds are used to create new transit services, making transit available to more people in both urbanized and rural areas. Other funds are used to improve the condition of current transit services, making them more reliable and appealing to people.
- FTA will provide \$63 million (5% above FY 2000 level) in financial assistance to Metropolitan Planning Organizations and State Departments of Transportation for planning activities. These investments ensure that new transit services are accessible, convenient, and well managed.
- FTA will participate in numerous research activities. These activities increase the capacity of public transit by improving train control systems and fleet management, and they help FTA to provide more customer friendly service in order to attract riders. (\$47 million in FY 2001, same as in FY 2000)
- FTA will work to ensure the safety of public transit by auditing the security of transit systems, providing guidance on emergency response, and assisting with antiterrorism plans, among other activities. These activities are geared to making public transit appealing to people. (\$6.1 million in FY 2001, 12% above FY 2000 level)

Management Challenge – Transit Grant Oversight

DOT grants to states and localities are a key tool to expand transit ridership. Oversight of these grants is a core management responsibility of FTA. Grants management and oversight assures that Federal funds are spent efficiently and effectively in accordance with applicable laws and regulations. Over the past several years, FTA has worked to continuously improve its grants management by implementing

better oversight activities and exercising full use of available enforcement tools to correct grantees' noncompliance with federal regulations. As a result, FTA is reducing the risk associated with its grants program. To judge their progress in improving grantee compliance with statutory and administrative requirements, FTA has set these goals:

- Reduce by five percent per year the deficiency findings per triennial and state management oversight review. (Baseline under development)
- Reduce by five percent per year the deficiency findings per financial management and procurement review. The FY 1998 baseline is an average of 10.5 findings per review.
- Increase by 5 percent the number of deficiencies resolved within the 90-day timeframe. (Baseline under development)

Other Federal Programs with Common Outcomes:

The Departments of Health and Human Services, Education, Housing and Urban Development, and Labor are interested in improving the mobility of low-income workers. Public transit can provide better access to work opportunities, social services, and health care.

BUS AND RAIL TRANSIT FLEET CONDITION: Public transit provides people with a reliable way to get around day by day, whether they are going to and from work, school, entertainment, or shopping. If the transit infrastructure is in disrepair, then reliability drops and service schedules are not met. Ridership may also drop, reducing many of the environmental and congestion benefits of transit. By improving the condition of buses and the rapid rail fleet, DOT can keep public transit moving and make sure that it is reliable and dependable.

Performance Goals & Results

Performance Measure:

Original: Average age of motor bus fleet (in years).

Revised: Average condition of motor bus fleet (on a scale of 1 (poor) to 5 (excellent)).

Goals:	1999	2000	2001
	--	3.15	3.20

Actual: 3.10

Performance Measure:

Original: Average age of rapid rail fleet (in years).

Revised: Average condition of rail vehicle fleet (on a scale of 1 (poor) to 5 (excellent))

Goals:	1999	2000	2001
	--	3.19	3.24

Actual: 3.14

Note on Revised Performance Measure: Prior to 1999, transit vehicle condition was measured by using average vehicle age as a surrogate. While this measure is useful as shorthand, it oversimplifies the issue. In order to improve on the measurement of condition, FTA undertook two surveys, the National Bus Vehicle Condition Assessment and the National Rail Vehicle Condition Assessment. These surveys involved actual inspections of a national sample of motor buses, light rail vehicles (e.g., streetcars), and heavy rail vehicles (e.g., subway cars). Vehicle conditions were assessed on a 1 to 5 scale:

Excellent (5.0): No visible defects, near new condition

Good (4.0): Some (slightly) defective or deteriorated components

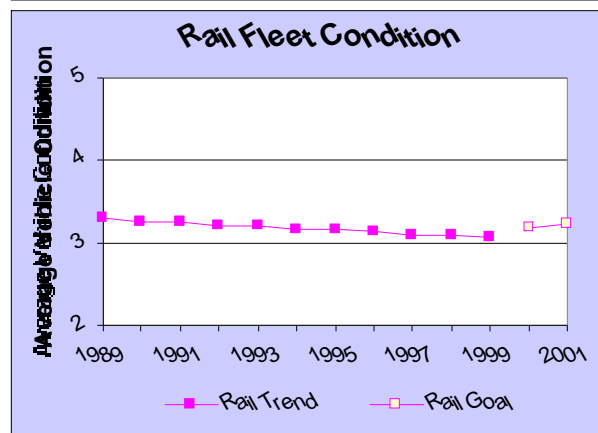
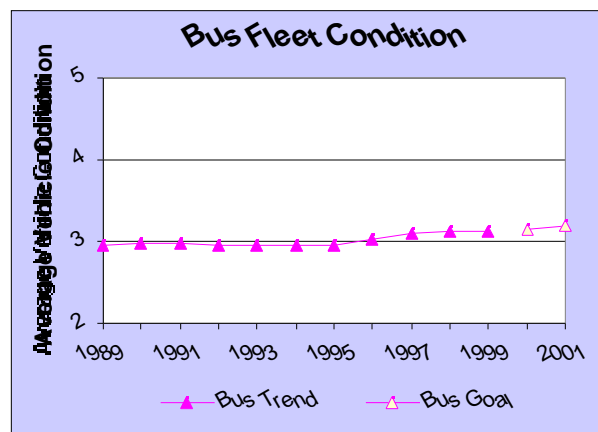
Adequate (3.0): Moderately defective or deteriorated components

Substandard (2.0): Defective or deteriorated components in need of replacement

Poor (1.0): Critically damaged components or in need of immediate repair

Data from the survey were then used to create a model of vehicle conditions that can be applied to vehicle inventory data in the National Transit Database (NTD) to generate average condition numbers for both bus vehicles and rail vehicles.

No 1999 goals were set for the original measures in the 1999 Performance Plan.



External Factors: DOT provides substantial grants, but state and local agencies allocate these resources to improve the condition of their transit infrastructure. Furthermore, the impact of today's capital investments will not be realized for several years. In the meantime, changes in the national and regional economies may affect transit investment, maintenance, and use.

1999 Results: Through 1999, bus vehicle conditions remained relatively constant, as they have for the past several years. The maintenance, rehabilitation, and replacement of bus vehicles have occurred at consistent rate, reflecting both industry practice and federal policies on the use of federal funds for bus replacement. It is expected that recent increases in investment levels,

especially those made available by TEA-21 will allow for transit agencies to accelerate maintenance and replacement of buses, resulting in an improvement in conditions. FTA also continues to fund research and provide technical assistance on vehicle technologies and maintenance practices to encourage transit operators to adopt new innovations.

Preliminary indications from the National Rail Condition Assessment show that transit operators are maintaining rail vehicles in good or better condition much longer than expected. As a result, the average condition of the rail fleet is roughly equal to that of the bus fleet, despite the fact that the average age is well in excess of the expected level given normal industry vehicle replacement cycles.

Until recently, capital investment levels have not permitted vehicles to be replaced as quickly as needed to maintain average fleet age. As investment levels increase under TEA-21, it is likely that transit operators will be able to accelerate vehicle maintenance and replacement, resulting in an improvement in rail vehicle conditions.

FY 2000 Performance Plan Evaluation: Data collected in 1999 on the condition of rolling stock provides a base line against which progress can be measured. Goals have been set for both 2000 and 2001 using the new performance measures for bus and rail transit fleet condition.

Strategies and Initiatives to Achieve 2001 Goal: DOT provides grants to state and local agencies and local transit authorities in order to promote investment in the transit infrastructure.

- The Formula Grants program provides funds for transit projects, including preventive maintenance, and bus and railcar purchases. (\$3.35 billion in FY 2001, 10% above FY 2000 enacted level)
- The Major Capital Investments Program provides grants to projects that increase investment in the transit infrastructure. This program will provide \$529 million for buses and bus facilities, \$1,058 million for rail modernization, and \$1,058 for new rail projects and extensions. (Total funding equals \$2.65 billion, 6% above FY 2000 enacted level)
- The Job Access Program provides funding for new transportation services, which are designed to help welfare recipients commute to work. Although it is targeted for a specific population, this program also represents an investment in the condition of our

transit infrastructure. (\$150 million in FY 2001, 100% above FY 2000 level)

- FTA collects data for the National Transit Database and uses this information to produce the Condition and Performance Report to Congress. These activities ensure that funding from other programs are allocated efficiently to get the most out of our investments. (\$2.5 million)
- FTA is also developing the Transit Economic Requirements Model (TERM), which more accurately depicts the relationship between asset age and condition. Nonlinear deterioration curves are now used to assess the condition of public transit assets.

Other Federal Programs with Common Outcomes: None.

TRANSPORTATION ACCESSIBILITY: Transportation can be vital in maintaining independence for people with disabilities. However, despite important progress toward accessibility, transportation remains a major obstacle to employment and participation in the community for many people with disabilities. The Americans with Disabilities Act (ADA) requires that public transportation services must be accessible to individuals with disabilities, and DOT has set a goal which is more ambitious than the statutory requirements of ADA.

Performance Goals & Results

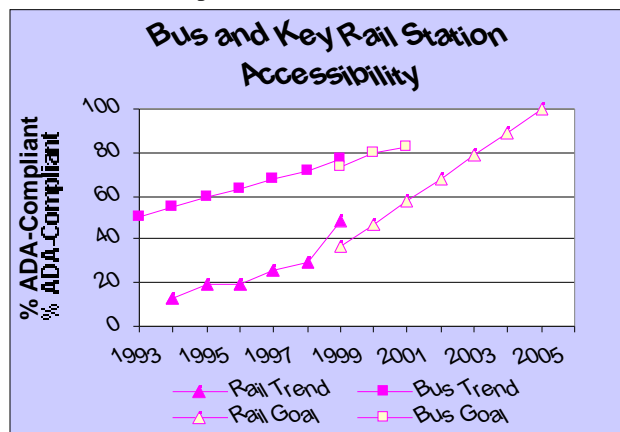
Performance Measure: Percentage of bus fleets that are ADA-compliant.

Goals:	1999	2000	2001
	73%	80%	83%
Actual:	77%		

Performance Measure: Percentage of key rail stations that are ADA-compliant.

Goals:	1999	2000	2001
	37%	47%	58%
Actual:	49%		

External Factors: As the population ages, more people will require accessible public transit. DOT provides grants and technical assistance, but state and local agencies decide how to best allocate these resources to ensure ADA compliance.



1999 Results: In 1999, 77 percent of the transit bus fleets were ADA-compliant, compared to 72 percent in 1998. This exceeded our goal of 73 percent for 1999. ADA compliance is measured by the number of lift- or ramp-equipped buses in the fleet.

Funding provided in TEA-21 helped to continue the trend of increased accessibility of the transit bus fleet. The fleet becomes more accessible as older vehicles are replaced. But, recently, the rate of increase in fleet accessibility has slowed because many of the buses bought in 1999 replace buses that were already lift-equipped. In the future, as a result of production capacity limitations and the trend toward increased emphasis on bus facilities (other than buses), we expect

that additional TEA-21 funding will have only a modest effect on fleet age. Currently, some of the major bus manufacturers have a backlog of three years.

There are a total of 689 key rail stations nationwide at 33 transit properties. (A "key station" is one designated as such by the commuter authority or light/rapid rail operator in conjunction with the disability community. Criteria for identifying key stations include: (1) number of passenger boardings, (2) whether or not the station is a transfer station, a major interchange point, or an end station and (3) whether the station serves major activity centers.) In FY 1999, 340 or 49% of key rail stations were ADA-compliant which exceeded our goal of 37% (254).

The 1998 FTA Voluntary Compliance Agreement (VCA) initiative, the establishment of quarterly key rail station status reporting, and continuing key rail station assessments have significantly increased the number of fully compliant key rail stations during FY 1999.

The ADA of 1990 required that key rail stations be accessible by July 28, 1993. However, the regulations (49 CFR 27.125) implementing this legislation allowed the transit provider, in certain circumstances, to obtain a "time extension" granted by the FTA Administrator to come into compliance. ("Time extensions" could be granted up to 2020 for extraordinarily expensive structural modifications following the procedures set forth at 49 CFR 37.47(c) and were very judiciously granted by the FTA Administrator following ADA Review Board recommendation for approval.)

FTA developed Voluntary Compliance Agreements (VCAs) for those key stations not in compliance by the July 1993 date and not meeting the regulatory criteria for a "time extension." (A VCA is a written agreement between FTA and the grantee, representing a commitment to reach compliance following an agreed upon schedule with milestones. Because some of the initial VCA and time extension dates were not met by grantees, a new VCA Initiative with stronger sanctions for not meeting the scheduled milestones was put in place with the goal of bringing all key stations into compliance by 2005. Under this new VCA initiative, failure to meet the compliance dates set in the Agreement will result in referral to the Department of Justice.

Key station assessments are another important part of FTA's ADA oversight effort. Over 358 individual stations have been subject to assessment since 1995. These assessments are conducted by engineers who measure and record data and provide technical assistance on-site, at each of the designated key stations. The key stations to be assessed are selected by our staff based on a number of factors including, but not limited to: 1) which key stations were covered during previous assessments; 2) current status reports; 3) issues and concerns brought to our attention at particular key stations; and 4) the need to follow-up on the completion of recent construction to correct deficiencies found during previous key station assessments, etc.

FTA's assessment of key stations serves as a check on the certification process and may have the short-term result of actually reducing the number of stations that are certified as ADA-compliant. However, these efforts allow us an opportunity to assist transit properties, and provide the technical guidance needed by them to ensure good faith efforts continue toward key station compliance and, in the long-term, ensure that stations certified as ADA-compliant are actually complying with the compliance standards.

FY 2000 Performance Plan Evaluation: Based on program performance in FY 1999, we expect to achieve the goal set for bus fleet compliance in the FY 2000 performance plan. The FY 2000 goal for key rail stations has already been met.

Strategies and Initiatives to Achieve 2001 Goal: FTA provides grants to help local transit operators in meet the requirements of ADA, and assesses compliance at rail stations, which are self-certified as compliant with ADA requirements. FTA and other DOT organizations also work to improve the accessibility of other modes of transportation.

- FTA's Formula Grants for Special Needs of Elderly Individuals and Individuals with Disabilities will provide funds to make transit more accessible. (\$78.9 million in FY 2001, 8% above the FY 2000 level.) Funds provided by other Formula Grants, Capital Investment Grants, and Job Access and Reverse Commute Grants may also be used to buy new vehicles and facilities that are ADA compliant.
- FTA will continue to review grantee compliance with ADA. (\$850 thousand in FY 2001)
- FTA's Project ACTION will conduct research, develop technology, and provide technical assistance to transit operators providing accessible service. (\$3 million in FY 2001, same as in FY 2000)

- FTA's Rural Transportation Accessibility Incentive Program will help operators of over-the-road buses finance ADA compliance. (\$4.7 million in FY 2001, 27% above the FY 2000 level)
- NHTSA will develop a comprehensive picture of the adaptive equipment and modified vehicle industry in terms of size, structure and growth of the industry, the nature and magnitude of safety problems, and ways to improve information on safety problems (\$200,000 in FY 2001). In addition, an information brochure developed in FY 2000 by the NHTSA Consumer Automotive Safety Information program will be disseminated to people who are considering whether to buy modified vehicles, or to adapt or modify a vehicle they already own.

Other Federal Programs with Common Outcomes: DOT participates in the DOT-HHS Coordinating Council with the Department of Health and Human Services. By cooperating with each other, DOT can develop transportation strategies to meet the needs of elderly and disabled people, and HHS can ensure that its services are accessible to its clients.

3/21/99			
OFFICE OF THE SECRETARY			
	FY 1999 Actual	FY 2000 Estimated	FY 2001 Request
Essential Air Service	50	51	51
TP&D	46	50	50
COAST GUARD	4	1	1
Aids to Navigation (Mobility projects)	664	585	660
FEDERAL AVIATION ADMINISTRATION			
Alteration of Budgets	484	457	483
Operations	162	111	148
Acquisition	3	2	3
Research	15	15	27
Operations	7,925	7,928	9,008
Facilities & Equip.	4,351	4,657	5,210
Research	48	-	-
Airport Grants	78	176	196
FEDERAL HIGHWAY ADMINISTRATION	1,827	1,607	1,986
Fed-aid Highways	1,587	1,436	1,562
State Infrastructure Banks	23,157	24,863	26,389
Miscellaneous Appropriations	22,944	24,753	26,292
Misc. Trust Funds	-	4	-
Misc. Highway Trust Funds	146	58	58
FEDERAL RAILROAD ADMINISTRATION	38	38	29
Safety & Operations	29	10	10
Railroad R&D	682	629	1,062
Rhode Island RR	15	24	26
Alaska RR	3	-	1
Next Generation HSR	5	10	17
Penn Station Redevelopment	38	15	-
ARC	11	8	8
Amtrak Grants	-	-	20
Amtrak High Speed Rail Initiative	1	1	1
FEDERAL TRANSIT ADMINISTRATION	609	571	521
All except UTC Safety, Job Access, Clean fuels	-	-	468
MARITIME ADMINISTRATION	4,959	6,706	6,657
Operations and training	8	8	8
RESEARCH & SPECIAL PROGRAMS ADMIN.	8	8	8
Emergency Transportation	-	-	-
University Marine Transportation	-	-	-
ST. LAWRENCE SEAWAY DEVELOPMENT CORP.	-	-	-
TOTALS	37,457	40,783	43,848

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STRATEGIC GOAL: ECONOMIC GROWTH AND TRADE

Advance America's economic growth and competitiveness domestically and internationally through efficient and flexible transportation.

Economic growth and trade reflect some of the most basic purposes of our transportation system. Beyond access and mobility, transportation is an enabler – a factor of production. One has only to look back at the historic role of canals, railroads, and the creation of the National Highway System to see the tremendous leveraging effects. On the other side of the ledger, there are costs. These may be in terms of delay, fairness and equity, regulatory cost, or even the shocks to our economy associated with disruptions. The FY 2001 budget proposes \$1.2 billion in direct programs to meet these challenges – about 19 percent more than 2000.

We Aim To Achieve These Strategic Outcomes:

- Reduce the real economic cost of transportation, taking into account changes in the efficiency and quality of transportation services.
- Ensure that improvements in transportation which advance America's economic growth and trade are done in a cost-effective manner consistent with the President's Executive Order on the cost-effectiveness of infrastructure investment.
- Reduce the average time for delivery of people, goods, and services to their destinations.
- Improve the reliability of the delivery of people, goods, and services to their destinations.
- Reduce trade barriers, support economic deregulation, and promote competition in domestic and international markets in transportation-related services.
- Improve the U.S. international competitive position by facilitating the export of domestic transportation goods and services.
- Accelerate desirable, sustainable, and cost-beneficial regional and local economic development through major transportation investments.
- Increase the education and public awareness of individuals in transportation-related fields.
- Expand opportunities and promote economic growth for all businesses, especially by encouraging and assisting small, women-owned, Native American and disadvantaged businesses to participate in DOT and DOT-assisted contracts and grants.
- Increase the nation's economic growth and trade through wise, cost-effective transportation investments.

This section includes a Performance Progress Report for 1993-1999. Alongside our 1999 results, we note if the target (goal) was met. If the goal was missed but recent data show the trend responding in a good direction, we note that important result. A detailed analysis of performance results for 1999 and our strategies and initiatives for 2001 follows the Performance Progress Report.

PERFORMANCE MEASURES:

Appalachian highway system
Flight route flexibility
International air service
Great Lakes winter navigation
Commercial shipbuilding
Access to jobs
Transportation and education
Disadvantaged and women owned
business contracting

DOT Performance Plan (FY 2001) and Report (FY 1999)

Our discussion of Economic Growth and Trade concludes with a presentation of Economic Growth and Trade Program Direct Spending.

PERFORMANCE PROGRESS REPORT: ECONOMIC GROWTH & TRADE

ECONOMIC GROWTH	1993	1994	1995	1996	1997	1998	1999	1999 GOAL	GOAL MET?	GOOD TREND?
Miles of Appalachian Development Highway System completed	2106	2142	2177	2204	2259	2290	2409	2327	✓	
Percent of aircraft able to fly off ATC-preferred routes	N/A	N/A	N/A	75	75	76	77	80		✓
Passengers (millions) in international markets with open aviation agreements	N/A	32.7	35.5	38.9	40.9	43.0	48.6	43.4	✓	
Days critical waterways are closed due to ice	N/A	N/A	N/A	7	0	0	0	2	✓	
Gross tonnage (in thousands) of commercial vessels under construction in U.S. shipyards	N/A	N/A	N/A	N/A	570	407	532	510	✓	
Students (in thousands) reached through Garrett A. Morgan Technology and Transportation Futures Program	N/A	N/A	N/A	N/A	71	1,031	1,502	650	✓	
Percent share of DOT direct contracts awarded to women-owned businesses	3.00	2.23	3.85	2.41	4.00	3.70	4.20	5.00		✓

N/A= Not Available

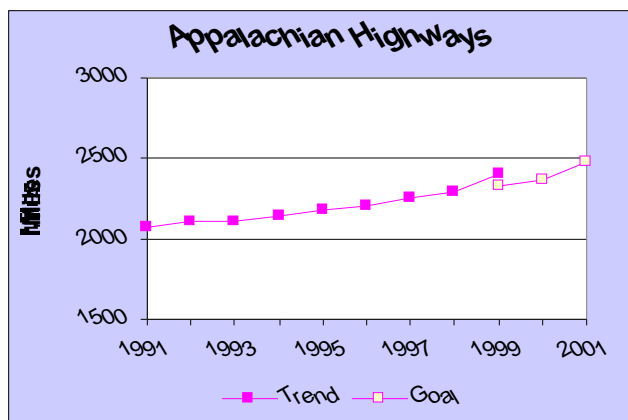
APPALACHIAN HIGHWAY SYSTEM: The economic condition of the Appalachian Region, comprising areas within 13 states, has historically lagged far behind the nation as a whole. Growth depends on overcoming the Region's isolation and providing this underserved area with adequate infrastructure. In 1965, the Appalachian Regional Commission (ARC) was established to help develop the Region, and it runs the Region's highway program. Congress has authorized a 3,025-mile system for Appalachia – the Appalachian Development Highway System (ADHS) – to provide a modern system of four-lane highways. Approximately 80 percent of this system is complete or under construction.

Performance Goal & Result

Performance Measure: Miles of the ADHS completed.

Goals:	1999	2000	2001
	2327	2373	2483
Actual:	2409		

External Factors: The ARC has responsibility for all decision-making functions of the Appalachian highway program. The most expensive and difficult miles remain to be built.



1999 Results: At the end of 1999, 2409 miles of the Appalachian Development Highway System was completed. This exceeded the goal of completing 2327 miles by 82 miles.

In May 1999, an Intermodal Summit was held in Lexington, KY and an Appalachian Coordinator's Workshop was held in November 1999. FHWA distributed guidelines implementing TEA-21 changes to all Division and State DOTs. The FHWA and ARC staff met with each FHWA division office and State DOT in States with ADHS mileage to discuss the ADHS program and visited selected construction sites.

FY 2000 Performance Plan Evaluation: The FY 2000 goal was met in 1999. The ARC now expects to have 2446 miles of the ADHS completed by the end of FY 2000. Based on this, the FY 2001 goal has been set at 2483.

Strategies and Initiatives to Achieve 2001 Goal:

FHWA will coordinate with the ARC, provide funds to States for construction of the ADHS, and provide administrative and technical assistance as it does for other Federal-aid programs.

- FHWA will provide funds to the 13 states with Appalachian corridor highways. The level of funding for each state will be determined by the ARC based on cost-to-complete estimates. Estimated obligations for FY 2001 are approximately \$405 million.
- FHWA will provide the ARC with administrative and technical assistance. At the ARC's request, FHWA gathers data, such as cost-to-complete estimates.

Other Federal Programs with Common Outcomes:

None

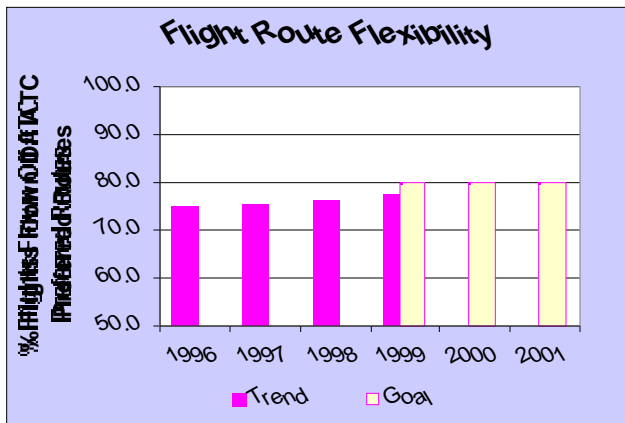
FLIGHT ROUTE FLEXIBILITY: Many of the most heavily traveled routes in the national airspace system have published air traffic control (ATC) preferred routes, which are based on flying from one navigational aid to another to ensure accuracy in navigation. These routes are designed to minimize conflicts in congested airspace, and they are an especially important tool in helping air traffic controllers organize traffic flow around major airports. However, these routes can differ significantly from the routes that pilots or flight planners would normally propose between two cities. Pilots and flight planners desire the capability to optimize their operations based on their own objectives and constraints, which vary flight-by-flight and user-by-user. By allowing aircraft to fly the most direct routes, or choose other indirect routes to avoid weather, there can be time and cost savings or smoother flights that avoid turbulence. Enhanced automation aids now being developed facilitate the use of more direct routes.

Performance Goal & Result

Performance Measure: Percentage of flights that aircraft are able to fly off ATC-preferred routes.

Goals:	1999	2000	2001
	80%	80%	80%
Actual:	77.4%		

External Factors: Growth in aviation increases the complexity of air traffic control, making it difficult to allow unrestricted flight in all areas of the system. The goal of the program is to increase system flexibility as much as possible without interfering with safety.



1999 Results: In FY 1999, 77.4% of flights were not subject to ATC preferred routes, falling just short of the FAA goal of 80 %. However, this is a slight improvement over FY 1998 (76.2%).

The aim of not assigning preferred routes is to give increased flexibility to aircraft, which may translate into improved scheduling efficiency and reduced flight miles. The action of not assigning or eliminating preferred routes does not automatically make a contribution to the goal of aviation efficiency. It does provide flexibility to the industry and the potential for improved efficiency in certain situations. The impact of the elimination of an ATC preferred route depends on the amount of traffic between the associated city pair. The impact increases as the amount of air traffic between the associated city pair

increases. Air traffic activities grew at a rate of 4.0% from 1998 to 1999.

In FY 1999, FAA eliminated 170 published routes. There was a small saving in distance flown from eliminating two of the Special High Altitude routes. Other initiatives that have partially supported the goal of increased flexibility are the North American Route Program (NRP) and the Departure Procedures (DP)/Standard Terminal Arrival Route (STAR) program. The NRP allows filing of more efficient routes unimpeded by the Preferred Route system, which begins 200 miles from the departure and ends 200 miles from the arrival destination. DP/STAR expands the utilization of the NRP by establishing procedures that increase ingress and egress points for aircraft operators transitioning to NRP. DP/STAR provides significant benefit to both the air traffic system and system users in some of the most heavily traveled airspace around major metropolitan areas.

FY 2000 Performance Plan Evaluation: The FAA is on track to achieve the FY 2000 performance plan target with existing strategies and initiatives.

Strategies and Initiatives to Achieve 2001 Goal: FAA is implementing the Free Flight Phase I program to allow greater use of direct routes. The enhanced software tools and the Conflict Probe software allows controllers to better project future flight paths and maintain separation for flights off the preferred routes.

- FAA will continue working closely with airlines to share air traffic information so that collaborative decisions can be made. Airlines often have priority preferences among their own flights and can indicate to FAA which flights are most important. Collaborative decision making is mostly by voice communication now, but software and hardware for automated collaborative decision making is being developed within the Free Flight Phases I and II Programs. (\$25.8 million)
- FAA will install and operate the User Request Evaluation Tool at three centers, which will allow

controllers to project aircraft flight paths into the future, and clear pilots for direct routes. This automation tool allows pilots to fly the most efficient routes between terminal control areas. (\$87.6 million compared to \$79.0 million in FY 2000)

- FAA is continuing work on the development of Conflict Probe to expand use to all 20 enroute centers under Free Flight Phase II. (\$17 million)
- FAA is considering methods for incorporating Published Preferred Route Reduction (P2R2) and DP/STAR into a single program, further enhancing flexibility while providing for increased complexity in the air traffic system.
- FAA is developing both equipment and procedures to allow more direct flights through restricted flight areas that are not in use.

Other Federal Programs with Common Outcomes:

FAA has coordinated with DOD for several years to allow direct flights in restricted airspace. This coordination will involve the military sharing the airspace on a real-time basis rather than pre-scheduled timeframes. This enables the commercial airlines more route flexibility and will assist the FAA as wider scale use of direct flights are made.

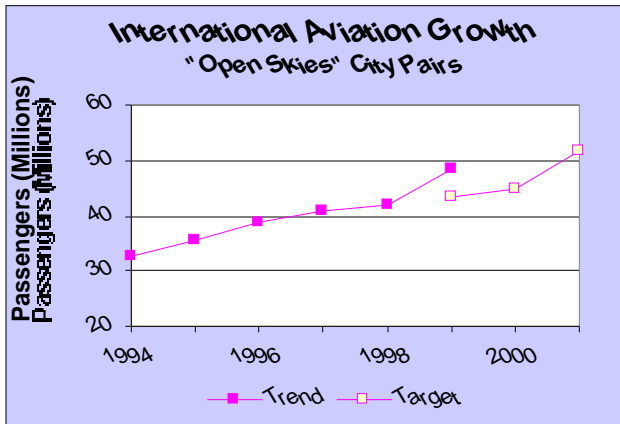
INTERNATIONAL AIR SERVICE: Since the 1940's international air transportation has been subject to restrictive bilateral agreements which raise prices and artificially suppress aviation growth. DOT's policy is to open international air travel to market forces and remove these bilateral limitations on the freedom of U.S. and foreign airlines to increase service, lower fares, and promote economic growth. DOT does this through "Open Skies" agreements. These agreements permit unrestricted air service by authorized airlines of both countries to, from and beyond the territory of each country, eliminating restrictions on how often carriers can fly, the kind of aircraft they can use, and the prices they can charge. These agreements benefit travelers throughout the world as well as the general economies of the U.S. and other nations.

Performance Goal & Result

Performance Measure: Number of passengers (in millions) in international markets with open aviation agreements.

Goals:	1999	2000	2001
	43.4	44.7	51.6
Actual:	48.6		

External Factors: Agreements to foster greater access are negotiated on a nation by nation basis, and must balance conflicting interests. Negotiating agreements and achieving passenger growth goals may be influenced by the strength of the world's economy and by regional economic cycles.



1999 Results: The FY 1999 goal of having 43.4 million passengers in international markets with open aviation agreements was exceeded by 5.2 million.

In FY 1999, DOT added five new open-skies agreements – with Italy, Pakistan, the United Arab Emirates, Bahrain, and Argentina. Thirty-six nations around the globe now have agreed to "open skies" with the United States. In addition, the U.S. has an open "transborder" agreement with Canada.

FY 2000 Performance Plan Evaluation: The FY 2000 goal was met in 1999; thus, the FY 2001 goal was set using FY 1999 results as a baseline.

Strategies and initiatives to achieve 2001 Goal:

- Continue conducting between 50 and 70 rounds of talks each year to promote open skies agreements, ranging from local talks to negotiations held as far away as Hanoi (\$4 million).
- Continue data analysis and economic support to assist the negotiators (\$0.13 million)
- For open skies partners, continue to streamline the regulatory processes. For example, in countries where the U.S. has an open sky agreement, DOT has awarded U.S. and foreign air carriers blanket, open-ended authority, so they need not apply for service to new cities or for periodic license renewal.

Other Federal Programs with Common Outcomes:

The Department of State works with DOT in negotiations that support DOT's open skies goal.

GREAT LAKES WINTER NAVIGATION: The Great Lakes support 15 million tons of regional commerce during the annual ice season, and Great Lakes shipping provides the most cost-effective transportation for many industrial materials, especially those carried in large bulk quantities. During the winter, heavy ice that forms on the Great Lakes would stop marine commercial traffic if left alone. Waterway closure increases transportation costs substantially, and potentially overloads other transportation systems.

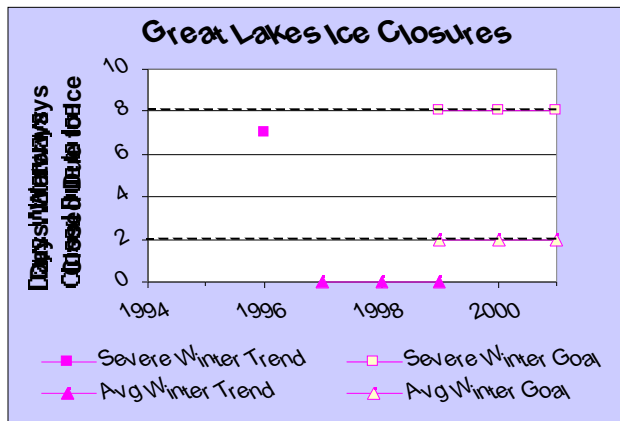
Performance Goal & Result

Performance Measure: Days critical waterways are closed due to ice.

Goals:	1999	2000	2001
	2#	2-8 #	2-8#
Actual:	0		

#2 days in an average winter, 8 days in a severe winter.

External Factors: Icebreaking performance is affected by ice thickness, which is linked to the severity of the winter weather. Some sources of traffic delay (e.g., canal lock closures) must be addressed by other government agencies such as the Army Corps of Engineers and the St. Lawrence Seaway Authority of Canada.



1999 Results: We met our goal for limiting closures of critical waterways to 2 days in an average winter and 8 days in a severe winter. There were no closures in 1999. Weather conditions were very mild, resulting in minimal ice formation - only a few vessels were assisted on the Great Lakes. In past severe winters, upwards of 500 vessels have needed assistance. The 1999 weather conditions continued a trend where winters of the last 20 years have been generally milder than the winters of the previous 20-year period. However, specific years can still be quite severe and require extensive icebreaking activity. The winter of 1993-94 was among the most severe of the past 35 years.

FY 2000 Performance Plan Evaluation: The FY 2000 goal target of limiting closures of designated critical waterways to 2 days (average winter) and 8 days (severe

winters) is realistic in light of past performance and long-term weather trends. However, continuing to meet the demand for icebreaking services is becoming more difficult due to aging icebreaker assets. The only heavy icebreaker operating in domestic waters, the Great Lakes icebreaker MACKINAW is over 50 years old and its annual maintenance needs are increasing. A high-horsepower icebreaker is a key asset in meeting the Coast Guard's target during moderate and severe winters. The Coast Guard is investigating strategies and future icebreaker needs that will provide a reliable winter navigation season for commerce in ice-bound areas.

Strategies and Initiatives to Achieve 2001 Goal: DOT aims to limit days of waterways closure due to ice by breaking the ice so that ships can pass, using Coast Guard ships with strengthened hulls for operating in ice.

- USCG will operate and maintain the heavy icebreaker MACKINAW and icebreaking tugs on the Lakes to keep waterways open.
- USCG will also conduct icebreaking escorts of commercial vessels, establish and maintain ice-free tracks, monitor traffic routing and ice conditions, and free vessels beset in ice.
- USCG will award the contract for replacing the MACKINAW. (\$110 million)

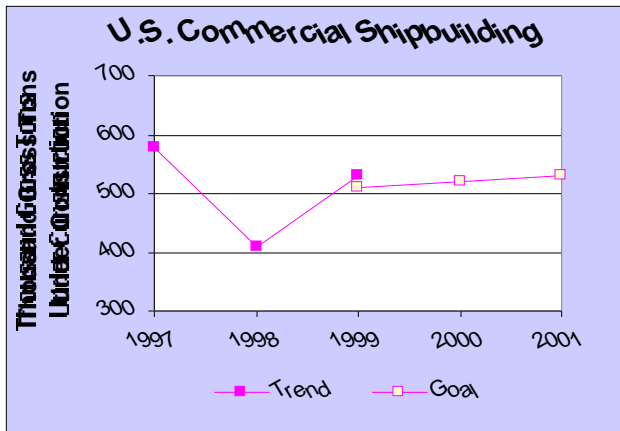
Other Federal Programs with Common Outcomes: The Coast Guard is the only agency with U.S. icebreaking responsibilities. The Canadian Coast Guard is the only other organization with significant icebreaking capability on the Great Lakes. The Coast Guard coordinates with the Army Corps of Engineers on general navigation and mobility issues in the Great Lakes, with the common objective of keeping winter shipping as efficient as possible.

COMMERCIAL SHIPBUILDING: Like other industries that depend upon defense contracting, major U.S. shipyards need to transition to commercial production while maintaining a U.S. shipbuilding capability sufficient for national and economic security. Major barriers have impeded the U.S. shipbuilding industry from competing in the international market, including substantial shipbuilding subsidies by foreign governments and greater economies of scale and efficiencies in foreign shipyards derived through series production of standardized vessels. U.S. government loans assist the U.S. shipbuilding industry to compete in the international market.

Performance Measure: Gross tonnage (in thousands) of commercial vessels under construction in U.S. shipyards.

Goals:	1999	2000	2001
	510	520	530
Actual:	532		

External Factors: Continued subsidization of foreign shipyards by their governments, including significant expansion of modern shipyard facilities, will create excess shipbuilding capacity and enable foreign shipyards to price ships below cost, an inducement for vessel owners to purchase ships outside the United States. The ongoing consolidation within the U.S. shipbuilding industry and corporate decisions by U.S. shipyards to focus on military ship construction could significantly reduce commercial shipbuilding capability for large, oceangoing vessels.



commercial shipbuilding orderbook stood at 80 ships (36 of 1,000 gross tons [GT] or greater) of 531,635 GT, or approximately 22,000 GT over the CY 1999 target of 510,000 GT. Overall, there was a net increase in the orderbook of 124,323 GT since the end of CY 1998. This increase can mainly be attributed to the contract award for two passenger cruise ships during the period that totaled 144,000 GT. Vessels delivered during the period accounted for less than 50,000 GT.

Of the total gross tonnage in the U.S. commercial shipbuilding orderbook at the end of FY 1999, almost three-quarters was concentrated in construction of three

crude oil tankers (247,626 GT) and two passenger cruise ships (144,000 GT). The other 75 vessels accounted for the remainder (140,009 GT).

During FY 1999, MARAD continued to emphasize timely and effective management of the Maritime Guaranteed Loan (Title XI) program to enable U.S. shipyards to increase productivity, reduce costs, and stimulate the construction of vessels in U.S. shipyards. MARAD approved 11 Title XI applications totaling over \$1.8 billion in loan guarantees. The approved projects covered two shipyard modernization projects and the new construction of 39 vessels. One of the two shipyard modernization projects will revamp the whole ship construction system at the yard, and is expected to result in an approximate 60 percent increase in productivity. All these projects will help to maintain a U.S. shipbuilding capability sufficient for national and economic security.

The ship construction supported by the Title XI program is instrumental in assisting U.S. shipyards to compete in the international market. For example, Title XI projects approved in FY 1999 included the construction of two drill rigs for a Brazilian company for approximately \$300 million, one power barge for a Cayman Island company for \$50 million, and one multi-purpose supply vessel for a Canadian company for \$24 million.

Uniform standards worldwide help to improve the competitiveness of U.S. shipyards. As a member of the International Organization for Standardization and the American Society for Testing and Materials, MARAD participated in the development of more than seven international commercial shipbuilding standards. Marine-related national standards involving mechanical aspects of shipboard installations were also developed for eventual consideration as international standards. MARAD also worked with standards developing bodies and the Coast Guard to facilitate adoption of voluntary national consensus standards in lieu of regulation.

In FY 1999, MARAD continued to provide standards, documentation, and information to the shipbuilding industry through its National Maritime Research and Education Center (NMREC) to assist in the development and/or retention of markets.

MARAD works closely with the Department of Defense's Advanced Research Projects Administration (DARPA) and the shipbuilding industry on the MARITECH (Maritime Technology) program. MARITECH is designed to enhance the competitiveness of U.S. shipyards through industry-initiated cooperative research agreements intended to improve ship design and construction processes. In FY 1999, MARAD administered 19 MARITECH projects, funded by DARPA, to help spur investment in new technologies and marketing strategies. In a number of cases, shipbuilding designs developed through MARITECH projects have been applied by shipyards in constructing Roll-on/Roll-off ships at National Steel and Shipbuilding Company, crude oil tankers at Avondale Industries, Inc., and oil product tankers for export at Alabama Shipyard.

FY 2000 Performance Plan Evaluation: Based on program performance in FY 1999, we expect to achieve the goal set in FY 2000 performance plan

Strategies and Initiatives to Achieve 2001 Goal: MARAD will continue implementation of the National Shipbuilding Initiative, emphasizing timely and effective management of the Maritime Guaranteed Loan (Title XI) program to enable U.S. shipyards to increase productivity, reduce costs, stimulate the construction of vessels in U.S. shipyards, and modernize U.S. shipyard facilities.

- MARAD will continue to support private sector investment in the construction of commercial ships in U.S. shipyards and the modernization of U.S. shipbuilding facilities, either independently or through the use of the Title XI (\$2 million in subsidy funds) program.
- MARAD will expand its participation in the development of domestic and international consensus shipbuilding standards to improve overall vessel safety and to eliminate unfair competitive advantages derived from less stringent shipbuilding standards and requirements overseas.
- MARAD will maintain the National Maritime Resource and Education Center (NMREC) as a centralized source of information, expertise and reference materials on commercial shipbuilding. The Coast Guard and the Navy are on the advisory board for NMREC.

Other Federal Programs with Common Outcomes: The goal of maintaining a specific gross tonnage of commercial vessels under construction in U.S. shipyards is exclusively a MARAD goal. In order to accomplish that goal, in addition to dealing directly with commercial

shipyards, MARAD coordinates with the Office of the U.S. Trade Representative (USTR) and the Department of State to end trade-distorting practices and open international markets for U.S. shipyards. Through the MARITECH program, MARAD works closely with DOD in assisting the shipbuilding industry in developing competitive ship designs, market strategies, and modern shipbuilding processes and procedures.

A byproduct of constructing commercial ships in U.S. shipyards is the maintenance of a U.S. major shipbuilding base of ship repair facilities with drydocking capability. This supports a shared goal of MARAD and DOD of having major shipbuilding and repair facilities available for both commercial and Navy ship building, conversion, and repair.

ACCESS TO JOBS: Three years ago, President Clinton signed into law the Personal Responsibility and Work Opportunity Reconciliation Act. Among other changes, the reform of our welfare laws limits the time a person can receive benefits and generally requires recipients to participate in job and training activities. But for many of these people, transportation is the key to making this transition. Public transit helps connect our lower income population to employment.

Performance Goal & Result

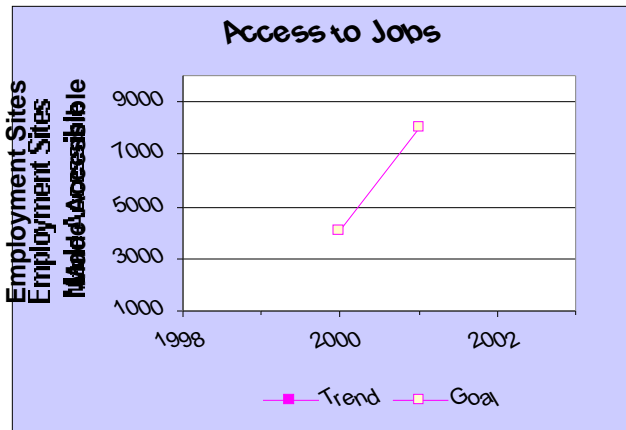
Performance Measure: Number of employment sites that are made accessible by Job Access and Reverse Commute transportation services.

Goals:	1999	2000	2001
	#	4050	8050
Actual:	1692*		

New measure in FY 2000 Plan.

* 1999 preliminary estimates

External Factors: A physical disconnect exists between job growth in the suburbs and the majority of the low-income population living in rural areas or central cities. Current transit services are poorly equipped to accommodate these commutes. Furthermore, low-income workers frequently commute during nontraditional hours and cannot take advantage of rush hour transit services.



1999 Results: In FY 1999, the first year of the Job Access and Reverse Commute (JARC) program, FTA selected 179 of the 268 project proposal submissions for funding. Upon selection, applicants moved to file final applications addressing all FTA standard grant requirements.

FTA granted applicants pre-award funding authority that permitted the selected applicants to start proposed services while their final applications were being processed. FTA also issued reporting requirements to provide information on the stated performance measures of reaching new job sites and on service effectiveness and efficiency. This information is to be reported in each

grantee's quarterly progress report that is required once FTA obligates grant funding.

By the end of FY 1999, FTA had actually awarded 39 JARC projects. Based on preliminary data from all but 6 of the 39 projects, a total of 1692 (721 new geographic connections 971 new time-of-day connections) new employment sites were made accessible.

FY 2000 Performance Plan Evaluation: Based on program performance in FY 1999, we expect to achieve the goal set in the revised FY 2000 performance plan.

Strategies and Initiatives to Achieve 2001 Goal: DOT provides grants to state and local governments and non-profit organizations representing the disabled, Native Americans, migrant workers, welfare recipients, and low-income individuals to create new and expanded transit services. The services are intended to move people from their homes to employment sites and other employment-related services, such as child-care and job training. Grants also support services that provide access to suburban employment sites.

- FTA's Job Access and Reverse Commute program will provide grants to help implement new transportation services linking welfare recipients to jobs. (\$150 million in FY 2001, 100% above the FY 2000 enacted level)
- Under the Job Access Support Program of the National Research and Technology Program, FTA will provide technical assistance to transportation planners, document the best practices of transportation planning, and demonstrate innovations in transportation services. (\$250 thousand in FY 2001)

Other Federal Programs with Common Outcomes:

Helping people move from welfare to work is a goal shared by HUD's Bridges to Work, DOL's Welfare to Work (WTW), and HHS's Temporary Assistance to Needy Families (TANF). Federal funds from these departments may be used as part of the local match to DOT's Job Access grants and other non-DOT Federal aid. DOT officials have worked closely with the Departments of Labor and Health and Human Services. As a result, these departments have increased the scope and flexibility with which both TANF funds (\$16.5B annually) and WTW funds (\$3B for FY 98,99 00) can be

used for transportation purposes. Not only can these funds be used to fund client's trips, but these funds now may be used to fund new and expanded transportation services similar to the Job Access and Reverse Commute Program. Individual family reporting requirements and benefit time limits do not apply when TANF and WTW funds are used for new and expanded transportation service development. Joint Secretarial DOT, DHHS and DOL guidance was issued in 1998 and is to be updated and reissued shortly.

TRANSPORTATION AND EDUCATION: The U.S. needs an educated, innovative, and highly skilled transportation workforce in the 21st century if it is to compete effectively in the global economy, and provide its people with a safe, efficient transportation system. This future outcome can be achieved only by investing now in the people who will make up our future workforce, and in research programs that will develop the tools and techniques that the future transportation system will require.

Performance Goals & Results

Performance Measure: Number of students graduating with transportation-related advanced degrees from universities receiving DOT funding.

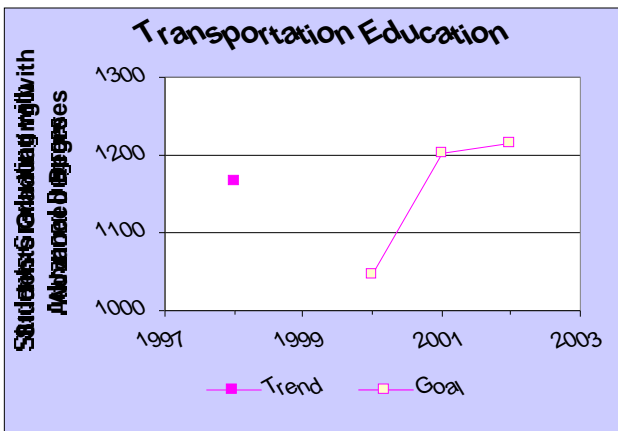
Goals:	1999	2000	2001	2002
	--	1046	1203	1215
Actual:	N/A			

Performance Measure: Cumulative number of students (in thousands) reached through the Garrett A. Morgan Technology and Transportation Futures Program.

Goals:	1999	2000	2001
	650	3,000	5,000
Actual:	1,502*		

* 1999 Preliminary Data

External Factors: Financial assistance is one of the most important factors in a student's selection to enroll in a particular graduate degree program. Typically, transportation programs must compete with more generously endowed programs such as those offered in biotechnology and aerospace-related fields. Graduates of baccalaureate transportation programs, especially women and other minorities, tend to go directly into the job market after graduation instead of immediately pursuing an advanced degree.



1999 Results: By the end of CY 1999, DOT had reached over 1,502,000 students through the Garrett A. Morgan Technology and Transportation Futures Program well above its 1999 goal of 650,000. This means that over

1,500,000 students have been involved in activities, such as internships, job shadowing, career days, video conferences, classroom visits and teacher externships, that make students aware of the opportunities available in the transportation field.

1999 activities included the Groundhog Job Shadow Day in which students visited DOT offices across the country to learn about the jobs we do. Regional transportation expositions were expanded to include a focus on careers in all sectors – land, sea and air -of transportation. DOT and its transportation partners also sponsored field trips for students to airports, transit facilities, dispatch and command centers so that they learn about both the jobs that people do there and what skills and knowledge are needed for those jobs.

Of particular note in 1999 was the awarding by the US Department of Education of a contract to the Illinois Board of Education and 15 other state education divisions. The contract provides funding for these organizations to work with the Morgan Program's business, association, labor and non-profit partners to create, test and evaluate transportation, distribution and logistics curricula that reflect industry and state academic standards.

By February 2000, RSPA received baseline data from 33 University Transportation Centers (UTCs) regarding the numbers of students graduating with transportation-related advanced degrees in the 1997-98 academic year. This number, 1,167, was significantly less than the number originally estimated for 1998 (4,000+). The difference resulted from the fact that RSPA used data from the 10 regional UTCs funded under ISTEA (each of which had three to 12 consortium members), to estimate numbers of graduates for the UTC program to be funded and expanded under TEA-21. However, only 10 of the 33 current UTCs have consortium members. Therefore the number of students graduating with advanced degrees from UTCs was less than original estimates.

FY 2000 Performance Plan Evaluation: Based on program performance in FY 1999, we expect to achieve the FY 2000 goal for the Garrett Morgan Program. Recently received data indicate that the UTC program may exceed its goal for FY 2000. The current goal for 2000, 1,046 students graduating with advanced degrees from universities receiving DOT funding, was based on

preliminary data.

Strategies and Initiatives to Achieve 2001 Goal: To achieve these goals, DOT will work with the private sector, labor, and educational institutions. DOT will work directly with University Transportation Centers, funded by DOT grants, to develop and implement focused transportation degree programs, and with schools at all levels to expand the information available to students about the potential for careers in transportation.

- RSPA will manage 33 University Transportation Centers (UTCs), administer \$33.3 million in FHWA and FTA funding and help create a new University Marine Research (UMR) program (\$2.5M) for maritime research. The Centers will provide educational grants to students pursuing careers in transportation, perform basic and applied research, conduct outreach efforts for pre-college students and practitioners, and report on performance indicators for the 1999-2000 academic year.
- The Garrett A. Morgan Technology and Transportation Futures Program will partner with education, business, labor and non-profit communities to interest students of all ages in transportation careers and ensure they have the knowledge and skills for those careers. FY 2001 Funding will be \$888,000 (\$688,000 from FHWA and \$200,000 from RSPA).
- The Eisenhower Transportation Fellowship Program will be funded at \$2 million annually to award fellowships to undergraduate and graduate students to pursue studies and degrees to prepare for transportation-related careers.
- The National Transit Institute at Rutgers University will receive \$4 million to improve workforce performance and build professional capacity in the transit industry.
- The National Summer Transportation Institute Program will allow secondary school students to spend four weeks at Historically Black Colleges and Universities and other Minority Educational Institutions to increase awareness of transportation-related career opportunities.
- The Summer Transportation Internship Program for Diverse Groups will provide on-site experiential transportation opportunities in DOT modal administrations for ten weeks during the summer.

Other Federal Programs with Common Outcomes: Since the inception of the Morgan Program, DOT has

worked with the Departments of Education and Labor and their jointly funded National School to Work Office. This alliance has created a memorandum of understanding among the Departments of Transportation and Labor and a local school district to create a school-to-work pilot project that, once perfected, will be shared across the country. The Department of Education has awarded a state school board money to create a consortium of state education divisions and transportation companies and unions that will develop transportation, distribution and logistics curricula based on state and industry standards of learning. DOT will participate both as a transportation “company” that needs workers and as a connection between the school boards and transportation employers. The Department of Labor has awarded the Department of Transportation \$200,000 to manage its portion of this consortia. Additionally, the jointly funded National School to Work Office has provided guidance, instruction and materials to DOT employees for all aspects of school to work, especially Groundhog Job Shadow Day. All three departments share a goal of educating and training our current and future workforce.

DISADVANTAGED & WOMEN OWNED BUSINESS CONTRACTING: In addition to bringing products and services into the market, small disadvantaged businesses (SDBs) and women owned businesses (WOBs) provide training and jobs for thousands of workers who are often socio-economically disadvantaged. SDBs and WOBs face special challenges in competing for government contracts, such as access to capital, bonding assistance, and expertise in complex contracting procedures. For those reasons, SDBs and WOBs are under-represented in receiving federal procurement contracts. For example, women own more than 35 percent of US businesses, yet receive less than 2 percent of federal contracting dollars. Therefore, in 1994, the Federal Acquisition Streamlining Act (FASA) established a government-wide goal of five percent of the total dollar value of direct contract and subcontract awards to WOBS. DOT's SDB percentage goal is negotiated with the Small Business Administration (SBA), and is currently set at 14.5 percent of the total dollar value of direct contracts. A direct contract is one awarded by DOT and not one of its grantees or recipients. DOT has the 6th largest direct federal procurement budget based on the FY 1998 Federal Procurement Data System Report.

Performance Goals & Results

Performance Measure: Percent share of the total dollar value of DOT direct contracts that are awarded to women-owned businesses.

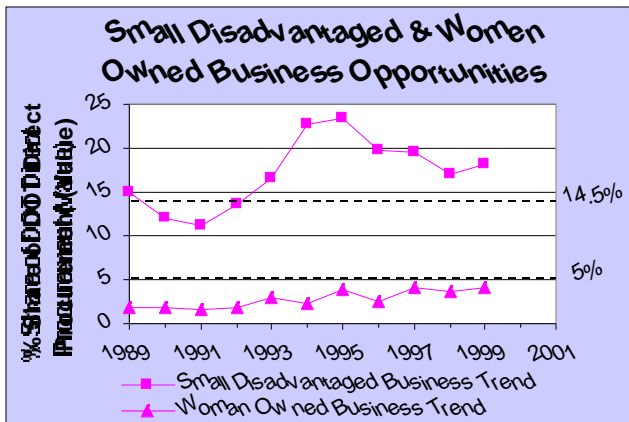
Goals:	1999	2000	2001
	5.0%	5.0%	5.0%
Actual:	4.2 % *		

Performance Measure: Percent share of the total dollar value of DOT direct contracts that are awarded to small disadvantaged business.

Goals:	1999	2000	2001
	14.5%	14.5%	14.5%
Actual:	18.3% *		

*Preliminary data

External Factors: The most significant challenges in reaching our goals are the growing government-wide practice of reducing administrative costs through contract bundling, and increasing use of credit cards in small purchases



1999 Results: Preliminary data indicate that in FY 1999 SDBs received 18.2 percent or \$320 million and that WOBS received 4.2 percent or \$73 million of DOT's direct procurements. Though short of the 5.0 percent

WOB goal, the 4.2 percent is above the government-wide average of approximately 2 percent and an improvement over the 1998 WOB share of 3.7 percent.

WOBS do not have a special set-aside authority allowing them to compete in a restricted market for Federal procurements. Therefore, WOBS must successfully compete with other small businesses for small business set-aside procurements or with all businesses for full and open procurements. To assist WOBS to successfully compete, DOT and the Office of Small and Disadvantaged Business Utilization (OSDBU) conduct outreach, training and offer financial assistance.

In FY 1999, OSDBU conducted outreach through its Liaison Outreach and Services Program and through Marketplace and Training Conferences. OSDBU also operates the National Information Clearinghouse that assists SDBs and WOBS to identify potential contracting opportunities. OSDBU made more electronic marketing and contract information available to WOBS, assisting them in becoming better informed on how to do business with DOT and in accessing transportation-related contract opportunities. OSDBU provided funds to the National Women's Business Council to promote and encourage women-owned businesses in procuring Federal contracts. DOT's ongoing Bonding Assistance Program and Short Term Lending Program improved WOBS access to financing and bonding.

FY 2000 Performance Plan Evaluation: Based on program performance in FY 1999, we expect to achieve the goal set in the FY 2000 performance plan.

Strategies and Initiatives to Achieve 2001 Goal:

- The Department is increasing its outreach efforts to SDBs and WOBS and the contracting community itself. DOT will work with the SBA to find ways to make it easier for contracting officers to identify and approach SDBs and WOBS as potential contractors.

- DOT will continue the historical \$3.0 million outreach and technical assistance program to assist and promote small businesses in general, many of which are disadvantaged or women-owned businesses. Small business promotion will continue to be done through training, conferences, disseminating information and technical assistance.
- Progress on the WOB goal will be aided in the future because of a recent DOT and SBA interagency partnership—created through a Memorandum of Understanding (MOU)—to increase the participation of WOBs in Federal procurement for both prime and subcontracting awards. DOT was the first agency to sign an MOU with SBA to do this.

Other Federal Programs with Common Outcomes:

The Small Business Administration (SBA) is the lead agency overseeing government-wide goals for small disadvantaged and women-owned business contracts. The Interagency Council on Women's Business Enterprises and the National Women's Business Council have common outcomes--and thus DOT is working to establish strong working relationships with them.

DIRECT PROGRAMS FOR ECONOMIC GROWTH & TRADE

Estimated Obligations (FY 1999-2001), in millions

3/17/00

		FY 1999 Actual	FY 2000 Estimated	FY 2001 Request
OFFICE OF THE SECRETARY		15	11	19
Minority Business Outreach & Loan Program		5	5	5
TPR&D	(Economic projects)	1	1	2
OST-X and OST-P Salaries & Expenses		10	11	12
COAST GUARD		140	160	261
Icebreaking	Operations	94	112	121
	Acquisition	46	48	140
	Research	1	0	0
FEDERAL HIGHWAY ADMINISTRATION		521	641	811
Fed-aid Highways	Appalachian Dev. Hwy Program	319	394	405
	Border Crossing Program	118	122	280
	Credit Program	41	101	99
	University Transp Centers	43	24	21
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.		0	0	0
Theft Prevention & Odometer Fraud		0	0	0
FEDERAL TRANSIT ADMINISTRATION		20	122	116
University Transp Centers		6	6	6
Access to Jobs		14	116	110
MARITIME ADMINISTRATION		68	144	15
MARAD Operations		8	8	8
Title XI Program		60	136	6
RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION		-	-	3
TOTALS		110	1,084	1,285

STRATEGIC GOAL: HUMAN AND NATURAL ENVIRONMENT

Protect and enhance communities and the natural environment affected by transportation.

Transportation makes our communities more livable, enhancing the quality of our lives and our society. However, transportation generates undesired consequences too, such as pollution, noise, and the use of valuable land and fisheries. No matter how much is done to improve the capacity and efficiency of our transportation system, we can not consider our programs to be successful unless we also manage the effects on our environment, and ultimately our own health.

DOT's objective is to advance the benefits of transportation while minimizing its negative environmental impacts. The Department also aims to advance government-wide goals for preserving our national resources. The FY 2001 budget proposes \$3.8 billion in direct environmental funding to meet this challenge – about 7 percent above 2000.

We Aim To Achieve These Strategic Outcomes:

- Improve the sustainability and livability of communities through investments in transportation facilities.
- Reduce the amount of transportation-related pollutants and greenhouse gases released into the environment.
- Improve the natural environment and communities affected by DOT-owned facilities and equipment.
- Reduce the adverse effects of siting, construction and operation of transportation facilities on the natural environment and communities, particularly disadvantaged communities.
- Improve the condition of our living marine resources.

This section includes a Performance Progress Report for 1993-1999. Alongside our 1999 results, we note if the target (goal) was met. If the goal was missed but recent data show the trend responding in a good direction, we note that important result. A detailed analysis of performance results for 1999 and our strategies and initiatives for 2001 follows the Performance Progress Report. Our discussion of Environment concludes with a presentation of Environmental Program Direct Spending.

PERFORMANCE MEASURES:

Mobile source emissions
Greenhouse gas emissions
Energy efficiency
Wetland protection and recovery
Livable communities - transit service
Aircraft noise exposure
Maritime oil spills
Fisheries protection
Hazardous Materials Spills
DOT facility cleanup
Environmental justice

PERFORMANCE PROGRESS REPORT: HUMAN & NATURAL ENVIRONMENT

NATURAL ENVIRONMENT	1993	1994	1995	1996	1997	1998	1999	1999 GOAL	GOAL MET?	GOOD TREND?
Tons (in millions) of mobile source emissions from on-road motor vehicles	74.4	76.6	67.9	66.8	65.1	63.7	N/A	64.9		✓
Acres of wetlands replaced for every acre affected by Federal-aid Highway projects	N/A	N/A	N/A	2.3	2.6	2.2	2.3	1.5	✓	
Percent urban population living within ½ mile of a transit stop with service of 15 minutes or less	N/A	N/A	N/A	11.22	11.56	11.21	11.24	11.56		
Number of people (in thousands) in U.S. exposed to significant aircraft noise levels	2,100	N/A	1,700	1,450	N/A	1,100	680	680	✓	
Gallons of oil spilled per MGS, by maritime sources	5.33	6.05	6.49	7.18	1.47	2.63	2.38	5.04	✓	
Compliance rate with Federal fisheries regulations	N/A	N/A	N/A	N/A	N/A	N/A	98	95	✓	
Tons of hazardous liquid materials spilled per pipeline million TMS	.0146	.0233	.0132	.0232	.0257	.0119	.0223	.0171		
Gallons of hazardous liquid materials spilled (non-pipeline) per serious transportation incident	2743	1608	2107	3365	1852	2221	2743	2046		
Percent DOT facilities categorized as No Further Remedial Action Planned under Superfund Amendments and Reauthorization Act	44	59	67	75	74	78	90	80	✓	
Environmental justice cases that remain unresolved over one year	N/A	N/A	2	6	5	13	13	12		

N/A= Not Available

MOBILE SOURCE EMISSIONS: The National Ambient Air Quality Standards target six major pollutants as among the most serious airborne threats to human health. Transportation emissions account for nearly 50% of these six pollutants. And nearly three-quarters of transportation-related emissions come from on-road motor vehicles. The quality of our air is a public good, and the cost of these pollutants is not captured in the marketplace. For this reason, the government works to mitigate this negative impact.

Performance Goal & Result

Performance Measure: Tons (in millions) of mobile source emissions from on-road motor vehicles.

Goals:	1999	2000	2001
Original:	63.9	62.7	61.4
Revised:	64.9	63.5	62.2

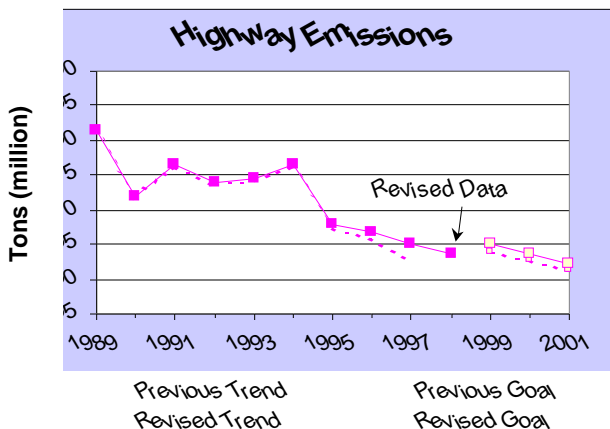
Actual: Not available

Note on Revised Data: The Environmental Protection Agency (EPA) has revised the methodology used to report on this indicator. It was learned recently that heavy-duty diesel trucks manufactured since the early 1990's produce higher emissions during high-speed operations than was originally expected. The model used to calculate mobile source emissions has been adjusted to reflect this change and EPA has recalculated the trend data since 1990. The goals for this performance measure have been adjusted with the new base. The new goals represent the same proportional reduction of 2 percent annually.

External Factors: Growth in the U.S. economy has translated into over 2% annual growth in vehicle miles traveled (VMT). The principal component—private vehicles—provides flexibility to consumers. So diversion of users to other, more emission-efficient modes must be balanced with market choice and other economic factors.

1999 Results: Mobile source emissions from on-road motor vehicles went down to 63.7 million tons in 1998, a decline of slightly more than 2 percent from the 1997 level. This level of mobile source emissions actually exceeded our revised 1999 goal of 64.9 million tons. (We expect to receive actual 1999 data from EPA by the end of the year.)

During FY 1999, a high percentage of the non-attainment and maintenance areas have shown positive results.

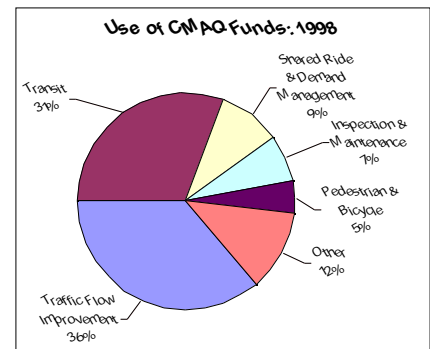


Ninety-four percent of ozone non-attainment and maintenance areas met their mobile source emissions budgets, as did 100 percent of areas for carbon monoxide and for particulate matter (PM-10).

These reductions in mobile source emissions occurred despite the fact that VMT grew more than 3.0% between 1997-1998 – the highest rate of growth since 1992 – largely associated with the continuing economic expansion.

While encouraging a growth in vehicle travel, the strong economy also supported the steady purchase of new bus, truck, and passenger vehicles with emission-efficient technologies, replacing older, more polluting vehicles. Although there has been a substantial increase in alternative-fuel vehicles since 1992, these accounted for only 400,000 out of the 200 million vehicles on the road in 1998.

Through the Congestion Mitigation and Air Quality Improvement (CMAQ) and clean fuels programs, FHWA and FTA have provided funding for State and local governments to encourage the use of alternative-fuel vehicles. Since its inception in 1991, CMAQ has provided funding to State and local



governments for transportation projects that provide air quality benefits. While individual projects yield small benefits, taken together CMAQ-funded projects have helped non-attainment areas meet their mobile source emission budget. Between 1992 and 1997, the portion of CMAQ funds used to support alternative-fuel vehicle projects ranged from 3-11 percent.

A multi-year Public Information Initiative on Transportation and Air Quality jointly funded by the Department of Transportation (the Federal Highway and Transit Administrations) and the Environmental Protection Agency (EPA) was launched in 1997 to help state and local governments meet their clean air goals

under TEA-21 and the Clean Air Act. In 1999, the initiative was expanded to 14 additional communities, which received federal support in the form of research, advertising and resource materials, an orientation workshop, and limited funding. The initiative has generated requests for program materials from 60 communities nationwide interested in local customization and distribution.

FHWA and FTA also assisted in the formation of the Alliance for Clean Air and Transportation, a national alliance of more than 20 public and private organizations to support an education program to reduce traffic congestion and improve air quality.

FY 2000 Performance Plan Evaluation: Barring unforeseen shifts in external factors, mobile source emissions for 2000 should meet or exceed the goal. This outcome has shown a consistently positive trend, and TEA-21 has provided increased funding for several programs that positively influence air quality, especially in the CMAQ programs.

Strategies and Initiatives to Achieve 2001 Goal: DOT aims to reduce mobile source emissions by encouraging the use of less polluting transportation; designing and implementing infrastructure that reduces congestion and emissions; researching and modeling the emissions impacts of investment choices; and supporting the development of fuel- and emission-efficient vehicles.

- FHWA will invest \$1.6 billion—an increase over FY 2000 funding—to reduce emissions through the CMAQ program. FHWA will work with State and local partners to insure that no CMAQ funds lapse and are obligated in a timely fashion.
- FHWA will identify and help resolve challenges in implementing amended conformity regulations for clean air by issuing guidance and providing technical assistance.
- Through continued research, FHWA will develop approaches to improve air quality and evaluate emissions impacts and cost-effectiveness of transportation strategies (\$2 million). Activities include research on a 2.5-micron particulate matter emission model to support new National Ambient Air Quality Standards.
- With the Partnership for a New Generation of Vehicles (PNGV), NHTSA will conduct research on the relationship between vehicle design, crash-worthiness, and occupant protection so that increased fuel efficiency and reduced emissions are achieved without compromising safety.

- NHTSA will also begin an analysis of the crashworthiness of specific PNGV technologies, such as hydrogen storage systems.
- FTA will invest \$100 million in new transit technologies through the Clean Fuels program.
- RSPA will administer the Advanced Vehicle Technologies Program (\$20 million), which seeks to improve vehicle fuel efficiency by 50% and to reduce vehicle emissions beyond the 2004 standards.
- Investment in transit and rail infrastructure provides a secondary contribution to reducing mobile source emissions, to the extent that public transportation is substituted for private vehicle travel.

Other Federal Programs with Common Outcomes: DOT efforts support the government-wide goals for National Ambient Air Quality Standards. DOT works closely with the EPA to achieve the national clean air goal including reducing mobile source emissions. DOT and EPA work cooperatively to implement a number of initiatives including the Transportation and Air Quality public education initiative, the transportation conformity regulation, and the Congestion Mitigation and Air Quality Improvement Program (CMAQ). DOT and EPA have also jointly funded a number of research efforts that target the reduction of mobile source emissions.

GREENHOUSE GAS EMISSIONS: The atmospheric accumulation of CO₂ and several other greenhouse gases (GHG) affects the re-emission of absorbed solar radiation, and may have negative consequences for the human and natural environment. During this century, annual emissions of CO₂ from human activity have risen by a factor of ten. During the next half-century, they are projected to grow by another factor of two or more. Transportation currently accounts for about one third of the carbon dioxide (CO₂) emissions, or 27% of greenhouse gas emissions, from human activity in the U.S. The impact of these trends is being studied globally.

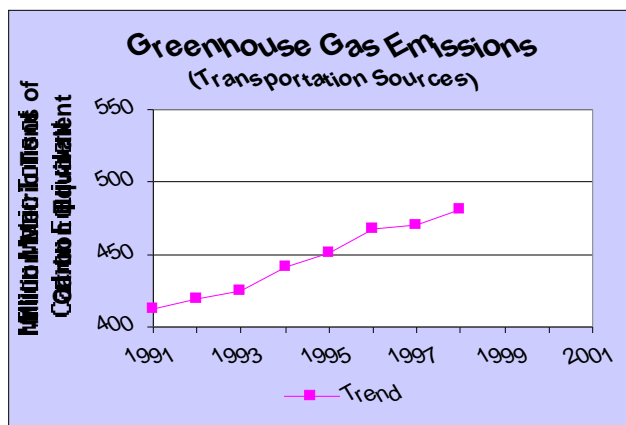
Performance Measure: Metric tons (in millions) of carbon equivalent emissions from transportation sources.

Goals:	1999	2000	2001
	--- #	--- #	--- #

Actual: Not available

A target will be set after the U.S. Senate ratifies the Kyoto protocol.

External Factors: Transportation is the fastest growing source of greenhouse gas emissions. The U.S. is experiencing over 2% annual growth in highway travel, and significant growth in other transportation modes. Demand for less GHG-intensive vehicles and fuels is weakened by comparatively low petroleum prices.



from 1998 show that greenhouse gas emissions continue to increase, mainly due to a strong and growing economy. Overall, 1998 greenhouse gas emissions increased 0.2 percent from their 1997 level, below the average growth of the 1990s (1.2 percent). Transportation-related greenhouse gas emissions, however, increased by 2.4% in 1998 compared to 1997. Emissions from motor gasoline, by far the largest source, grew by 2.8 percent; jet fuel emissions increased 1.5%; and, diesel emissions grew 3.7 percent. Much of the increase in transportation-related greenhouse gas emissions is due to the 2.5% growth in vehicle miles traveled from 1997-98. In 1998, the transportation sector accounted for 485 million metric tons of carbon, nearly a third of all carbon dioxide emissions and 27% of total greenhouse gas emissions.

Continued strong VMT growth makes an overall reduction in transportation-related energy use a difficult goal, but VMT growth slowed from 1997-1998 and transportation energy efficiency is improving. These trends should help slow the increase in emissions of transportation-related greenhouse gas emissions.

Continuing provisions in the Department's budget appropriations acts preclude NHTSA from any action to consider more stringent CAFE requirements, reducing the likelihood of significant improvements in vehicle fuel economy and thus greenhouse gas emissions.

As a result of these prohibitions, in 1999, NHTSA issued CAFE standards for light trucks that were identical to previously issued standards. The MY2001 fuel economy standard for light trucks was set at 20.7 mpg; the fuel economy standard for automobiles remained at 27.5 mpg. In 1998, the fleet fuel economy of the new light truck fleet was 20.9 mpg; new automobile fleet fuel economy was 28.7 mpg.

Through the Congestion Mitigation and Air Quality Improvement program (CMAQ), FHWA and FTA provided \$1.3 billion in funding in 1999 to State and local governments to improve air quality and reduce traffic congestion. Investment in such programs as traffic flow improvement, shared ride and demand management, mass transit, and pedestrian and bicycle programs should help reduce the amount of transportation-related greenhouse gas emissions.

The Secretary announced that contracts worth \$12.1 million were awarded in 1999 under the Advanced Vehicle Technologies Program (AVP). Authorized by the Transportation Equity Act for the 21st Century (TEA-21) and begun in FY1999, AVP aims at improving energy efficiency and reducing environmental emissions, including the emissions of greenhouse gases, in medium and heavy-duty vehicles.

In 1999, the Department created a new Center for Climate Change and Environmental Forecasting. The Center takes the lead in the Department for identifying and evaluating transportation strategies and technologies to reduce greenhouse gas emissions.

FY 2000 Performance Plan Evaluation: No target level was established for FY 2000.

Strategies and Initiatives to Achieve 2001 Goal: DOT supports the development and use of safe, fuel-efficient vehicles. While waiting for Senate ratification of the Kyoto Protocol, the Department will continue to work to reduce greenhouse gases in conjunction with other social and environmental missions assigned by the Congress.

- The new DOT Center for Climate Change and Environmental Forecasting will lead the evaluation of transportation strategies to reduce greenhouse gas emissions (\$1 million). This is a ONE DOT effort including OST Policy, FHWA, FTA, FAA, MARAD, RSPA, BTS, FRA, and Coast Guard.
- RSPA will lead a public/private partnership to develop, demonstrate, and deploy advanced transportation technologies for medium- and heavy-duty vehicles, through the Advanced Vehicle program. (\$20 million)
- USCG and MARAD will participate in a joint project with the Navy to develop fuel cell technology for marine applications (\$ 2.5 million).
- FHWA and FTA will participate in national and international efforts to understand transportation's contribution to greenhouse gases. They will also continue to conduct research and provide technical assistance to State and local transportation and air quality officials on the potential impacts on greenhouse gas emissions of programs such as commuter choice, telecommuting, and other transportation control measures (TCMs).
- To assure the safety of new concept vehicles, NHTSA will develop tools for evaluating the safety of vehicles being developed under the Partnership for a New Generation of Vehicles. In FY 2001, NHTSA will begin an analysis of the crashworthiness of specific PNGV technologies, such as hydrogen storage systems. (\$3.5 million).
- FAA will continue research on aircraft emissions reduction and control. Strategies for reduction of global emissions from aviation activities will be coordinated through the International Civil Aviation Organization (ICAO).

Other Federal Programs with Common Outcomes: DOT participates with the Departments of Energy and Commerce in the Partnership for a New Generation of Vehicles, and in a DOT/DOD/DOE initiative supporting public/private partnership to promote the design, development, and deployment of alternative fuels and propulsion systems. FAA cooperates with NASA on

aircraft engine research, including the Ultra-Efficient Engine Technology program.

ENERGY EFFICIENCY: Moving people and goods requires more than one-quarter of the total energy used in the U.S., and two thirds of U.S. petroleum consumption. Transportation is nearly totally dependent on oil for energy, and over half of the petroleum used in the U.S. must be imported. This dependency makes the U.S. economy particularly vulnerable to supply disruptions. To lessen this vulnerability, the Federal government acts to improve the fuel efficiency of various transportation modes and to develop transportation power systems that use alternatives to petroleum-based fuels.

Performance Goal & Result

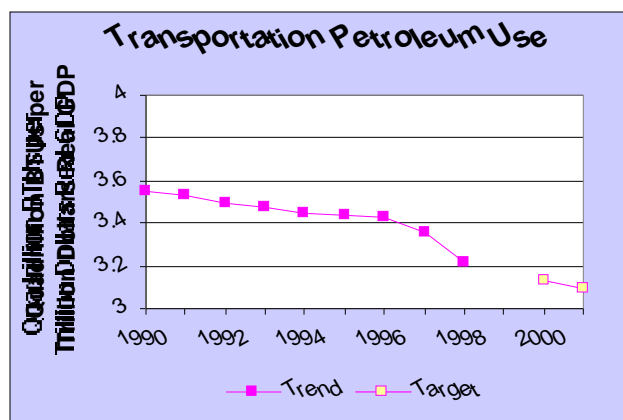
Performance Measure: Transportation-related petroleum consumption (in quadrillion BTUs) per trillion dollars of Real Gross Domestic Product (GDP).

Goals:	1999	2000	2001
	#	3.13	3.09

Actual: Not available

New measure in FY 2000 Plan.

External Factors: Growth in the U.S. economy has translated into steady growth in transportation energy consumption with 25.04 quadrillion BTUs of energy used in the transportation sector in 1998, an increase of 0.44% over 1997. Private vehicles, which accounted for 60% of transportation energy use in 1996, provide flexibility to consumers and the number of miles traveled by highway vehicles has been increasing by 2% per year. Shifting drivers to more fuel efficient or alternative-fuel modes will be subject to market choice and other economic factors.



from 1998 show that transportation-related energy efficiency is improving. Though total transportation energy use has been increasing, transportation-related energy use per dollar of GDP has improved 3.3% in 1998 compared to the previous year (see figure above). Although the miles of highway vehicle traveled continued to increase, VMT growth slowed from 1997-98 to 2.5% compared to 1996-97 VMT growth of 3.2%.

Since the overall highway vehicle fleet fuel efficiency has remained flat at about 19.7 mpg, VMT growth was a major factor in the 3% growth in transportation petroleum use to 154.9 billion gallons in 1998.

The continued strong VMT growth makes an overall reduction in transportation-related energy use a difficult goal, but VMT growth slowed from 1997-1998 and transportation energy efficiency is improving. Continuing resolutions in Congress' budget appropriations acts preclude NHTSA from issuing more stringent CAFE requirements. (See section on Mobile Source Emissions for further detail.)

In 1999, NHTSA issued CAFE standards for light trucks. The MY2001 fuel economy standard was set at 20.7 mpg, identical to the MY2000 standard. In 1998, the fleet fuel economy of the new light truck fleet was 20.9 mpg, against a standard of 20.7 mpg. New automobile fleet fuel economy was 28.7 mpg in 1998, against a standard of 27.5 mpg.

Through the Congestion Mitigation and Air Quality Improvement program (CMAQ), FHWA and FTA provided funding to State and local governments to improve air quality and reduce traffic congestion. In 1999, the Congress appropriated \$1.3 billion to DOT to fund such programs as traffic flow improvement, shared ride and demand management, mass transit, and pedestrian and bicycle programs.

The Secretary announced that contracts worth \$12.1 million were awarded in 1999 under the Advanced Vehicle Technologies Program (AVP). Authorized by the Transportation Equity Act for the 21st Century (TEA-21) and begun in FY 1999, AVP aims at improving energy efficiency and reducing environmental emissions, including the emissions of greenhouse gases, in medium and heavy-duty vehicles.

FY 2000 Performance Plan Evaluation: In the 2000 performance plan this goal was classified as "to be determined." We have since set a goal and expect to achieve it.

Strategies and Initiatives to Achieve 2001 Goal: DOT aims to reduce transportation petroleum consumption by encouraging the use of fuel-efficient transportation, and by designing and implementing infrastructure that

reduces energy consumption. DOT will also research and support the development of fuel-efficient vehicles as well as alternatives to petroleum fueled vehicles.

- FHWA will support State and local governments in implementing fuel efficiency programs including alternative fuel initiatives and other congestion reduction through the Congestion Mitigation and Air Quality Improvement (CMAQ) Program. A portion of the \$1.44 billion requested for CMAQ would be used for fuel efficiency projects, such as pedestrian and bicyclist programs, shared ride and mass transit activities.
- As part of the Partnership for a New Generation of Vehicles (PNGV), NHTSA will study the relationship between vehicle design, crash-worthiness, and occupant protection to support increased fuel efficiency without compromising safety (\$3.5 million). NHTSA will also issue a Corporate Average Fuel Economy (CAFE) standard for model year 2003 light trucks.
- FTA will complete demonstration of proton exchange membrane fuel cell hybrid transit buses. With the transit industry and domestic fuel cell suppliers, FTA will also initiate development and demonstration of non-hybrid proton exchange membrane fuel cell transit buses. The clean fuels program is funded at \$100 million.
- Coast Guard will accelerate development, test, and evaluation of a full-scale prototype fuel cell for potential use on Coast Guard cutters (\$2.5 million).
- RSPA will lead a public/private partnership to develop, demonstrate, and deploy advanced transportation technologies for medium- and heavy-duty vehicles, through the Advanced Vehicle program (\$20 million requested within FHWA).

Other Federal Programs with Common Outcomes:

DOT supports the Comprehensive National Energy Strategy. The Federal R&D partnership for next generation vehicle development includes the Departments of Commerce, Defense, Energy, and Transportation, as well as the Environmental Protection Agency. DOT leads an interagency task force on Bicycling and Walking. Members of the task force include the Department of the Interior, Consumer Product Safety Commission, Environmental Protection Agency, General Services Administration, and Centers for Disease Control.

WETLAND PROTECTION AND RECOVERY :

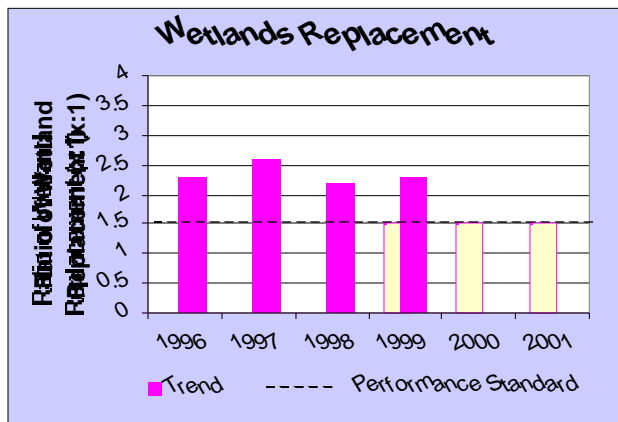
Wetlands are an important natural resource. They provide natural filtration of pollutants, and they store and slow down the release of floodwaters, thereby reducing damage to downstream farms and communities. Wetlands also provide an essential habitat for biodiversity. But many of the nation's wetlands have been lost to development over the years, before their value was fully recognized. Highways and transportation facilities (siting, construction, and operation) can be a significant factor affecting these ecosystems.

Performance Goal & Result

Performance Measure: On a program-wide basis—acres of wetlands replaced for every acre affected by Federal-aid Highway projects (where impacts are unavoidable).

Goals:	1999	2000	2001
	1.5	1.5	1.5
Actual:	2.3		

External Factors: Wetland impacts are sometimes unavoidable, particularly in construction of bridge crossings. In addition, projects on existing alignments can cause wetlands degradation that is impractical to avoid. In areas where the concentration of wetlands is high (southern bottomlands, Midwestern prairie potholes, and eastern pine flatwoods), transportation projects often must cross wetlands to provide accessibility to the area.



impacting wetlands wherever possible. where wetlands impact was unavoidable, projects achieved an average replacement ratio of 2.3 to 1 for every acre affected in 1999. This exceeded DOT's performance standard of 1.5 to 1.

In 1998, a preliminary study was completed to identify those Federal-aid highway projects demonstrating exemplary practices in characterizing, protecting, and restoring important habitat and ecosystem linkages, including wetlands. Many of the best practices were part of successful, ongoing effort to protect wildlife populations, habitat and ecosystem integrity. Based on

this study, a report was issued in 1999 providing guidance on assessing ecosystem impacts.

Recent estimates of total wetland loss indicate that, between 1982 and 1992, approximately 160,000 acres of wetlands per year were being converted to other land cover types by all sources of impacts. During that same period, only about 75,000 acres of wetlands were being restored or created each year—a deficit of about 85,000 acres per year. After 1992, an additional 68,000 acres per year have been restored or established as the result of the Wetlands Reserve and other new wetland conservation programs. FHWA programs contributed an average of over 4,000 acres to this annual total between 1996 and 1999.

The actual replacement ratio for highways represents about 3% of the estimated total nationwide wetland replacement rate (most of which comes from restoration of agricultural lands). These ratios suggest that the project eligibility and funding provisions for wetland mitigation in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) have been effective in enhancing the natural environment. Those provisions, now continued in TEA-21, are important to maintaining this trend into the future, and should be effective in accomplishing the Nation's environmental goals under the President's Clean Water Action Plan initiatives and the Administration's National Wetlands Plan.

FY 2000 Performance Plan Evaluation: No change is proposed to the performance standard for a 1.5:1 wetlands recovery ratio. This target is consistent with the long-term goal in the Administration's Clean Water Action Plan, Key Action #44, committing the FHWA to achieving a net wetland increase of 50% in ten years.

Strategies and Initiatives to Achieve 2001 Goal: DOT promotes the construction, maintenance, and use of transportation projects that are compatible with national environmental objectives and that conform with the Clean Water Act. It does this primarily through research, new technologies, analytical models, management training, and development of technical transfer documents.

- FHWA will test and implement environmental analytical models to assist decisionmakers, and will continue to promote initiatives that protect and

enhance ecosystems on a programmatic basis. This will include the use of inventories, partnerships with resource agencies, and practices such as wetland banking and watershed-based resource protection.

- FHWA will prepare case studies based on the results of watershed pilot programs conducted by the Washington State DOT and other sponsors. These will provide recommended techniques and practices to minimize transportation impacts on watershed functions and values.
- FHWA will support additional R&D to continue the development and implementation of new wetland evaluation techniques, including the Hydrogeomorphic (or HGM) assessment method, in cooperation with EPA and the U.S. Army Corps of Engineers.
- FHWA will begin revising Federal Land Highway procedures to ensure consistency with revised Federal-aid NEPA procedures.
- Amtrak, working with the Corps of Engineers, assesses wetland effects and pays the Corps a fee that covers the conversion/purchase of 1.5 times what was taken. FRA oversees this process.
- FTA ensures that grantees restore the functional value of any wetlands that are degraded.

Other Federal Programs with Common Outcomes:

The Department will continue to coordinate wetland programs and research initiatives with EPA; the Departments of Interior, Commerce, and Agriculture; and the Army Corps of Engineers. This coordination is aimed at improving wetlands policies, and implementing the President's Clean Water Action Plan by ensuring a net gain in wetlands.

The FHWA meets regularly with other Federal agencies as a member of the White House Working Group on Wetlands and participates in joint research with other Federal agencies for studies on wetland evaluation and mitigation. Information is shared through all these activities.

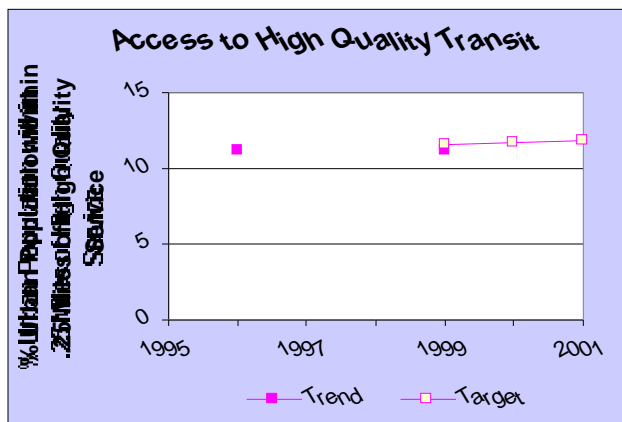
LIVABLE COMMUNITIES – TRANSIT SERVICE: For the 80 million Americans who do not drive, public transit provides access to school, work, market, community services and family. It lessens highway congestion and helps maintain environmental quality by slowing the growth of automobile traffic. And it provides options. Together, these features help to improve our human environment and make communities more livable.

Performance Goal & Result

Performance Measure: Percent of urban population living within $\frac{1}{2}$ mile of a transit stop with service frequency of 15 minutes or less (non-rush hour).

Goals:	1999	2000	2001
	11.56%	11.68%	11.78%
Actual:	11.24%		

External Factors: The traditional commute from the suburbs into the city is becoming just one of many commuting patterns. People are moving farther away from the central cities, and jobs are increasingly located in the suburbs. The demographic shifts are often translating into longer commutes, and more scattered travel patterns.



1999 Results: The 1999 goal to increase the percent of urban population living within $\frac{1}{2}$ mile of a transit stop with service frequency of 15 minutes or less was not met. Access to high quality transit service has remained essentially unchanged at 11.2% since 1996.

The percent of the population living within $\frac{1}{2}$ mile of a transit stop with service frequency of 15 minutes or less in non-rush hour can be increased either by extending transit service into previously unserved areas or by improving the service in areas that already have transit service. In addition to providing improved access to transit and better service for the current residents of the service area, both of these strategies are aimed at encouraging transit-oriented residential and commercial development.

In 1999, there was only a slight increase in overall system route mileage and the mileage added did not

contribute to achieving the goal because the service frequency exceeded 15 minutes or less. This is generally true for new service areas without the population density needed to justify more frequent service. However, as the expected transit-oriented residential and commercial development begins to occur in areas with new transit service, the number of people with access to high quality service in these newly served areas should increase.

Further, many of the new rail systems to come on line recently have replaced or led to diminished service on parallel bus lines, resulting in a small net increase in coverage. Thus, these investments did not produce a significant increase in the number of people with high quality service.

Despite the difficulties in increasing the percent of urban population with good transit service, FTA continued to implement initiatives that are expected to impact future achievement of this goal. TEA-21 eased some of the previous restrictions on joint development of transit stations, and FTA continues to raise awareness of this effective tool. Finally, the criteria used to evaluate New Starts projects have been modified to incorporate transit supportive land use as an important factor in project justification.

FY 2000 Performance Plan Evaluation: The development patterns of our country are changing slowly. States such as Oregon and Maryland have adopted land use policies that promote in-fill and pedestrian orientation. As more states and localities adopt such policies, the percent of the American population living within $\frac{1}{2}$ mile of transit will increase. Anecdotal evidence indicates that FTA's Livable Communities and similar efforts by other public entities and private organizations have successfully promoted more efficient land use policies. Due to the importance that FTA attaches to transit and pedestrian friendly communities, we will leave this goal unchanged. We will continue our efforts to promote the adoption of more efficient land use policies at all levels of government.

Strategies and Initiatives to Achieve 2001 Goal: DOT provides funding for transit infrastructure and planning. The Livable Communities initiatives stress planning and design of community-oriented and customer-friendly transportation facilities. DOT provides funds and technical assistance to local communities so they can better incorporate transportation into community planning and development. Best practices in fully

integrating community and transportation planning are being documented and demonstrated.

- In 2001, FTA Formula Grants, Capital Investment Grants, and the Job Access and Reverse Commute Program will provide over \$6.1 billion for investment in public transit infrastructure, 5% above FY 2000.
- To support the Livable Communities initiative, FTA will invest in the following activities:

- financial assistance to Metropolitan Planning Organizations and State Departments of Transportation. MPOs and states develop and implement the programs to improve their own communities. (\$63 million in FY 2001, 5% above FY 2000)

- Research and Technology, including investigating the relationship between transportation and land use, developing technology to reduce travel time, and improving intermodal connections. (\$47 million in FY 2001, the same level as in FY 2000)

- FHWA will continue to invest in the Transportation and Community and System Preservation (TCSP) program. (\$50 million in FY 2001, 50% above FY 2000)

Other Federal Programs with Common Outcomes:

DOT works with several other Federal agencies to coordinate transportation, housing, economic development and environmental programs. In conjunction with the Department of Health and Human Services, DOT has actively participated in a joint coordinating council that has successfully encouraged local Medicare agencies to utilize regularly scheduled transit service for medical appointments in lieu of more expensive specialized transportation. DOT and the Environmental Protection Agency are working together to promote the Commuter Choice initiative that helps mitigate congestion and encourages transit use. DOT and EPA are also working together to implement joint transportation planning and environmental Guidance.

AIRCRAFT NOISE EXPOSURE: Public concern and sensitivity to aircraft noise around airports is high. In recent years, noise complaints have increased even while quieter aircraft technology has been introduced. This aircraft noise is an undesired by-product of our mobility, and the government acts to reduce the public's exposure to unreasonable noise levels.

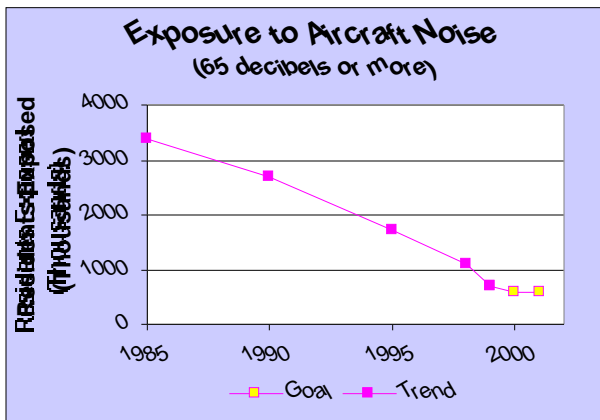
Performance Goal & Result

Performance Measure: Number of people in the U.S. (in thousands) who are exposed to significant noise levels (65 decibels or more).

Goals:	1999	2000	2001
	680	600	600
Actual:	680*		

* 1999 preliminary estimates

External Factors: Much of the recent progress has been achieved by legislatively mandated transition of airplane fleets to newer-generation aircraft that produce less noise. Most of the gains from this change will be achieved by FY 2000. The Airport Noise and Capacity Act (ANCA) of 1990 set December 31, 1999 as the deadline for elimination of Stage 2 (older, noisier) aircraft weighing more than 75,000 pounds. Growth in aviation activity also works against easy progress.



1999 Results: The projections and rate of population reduction are the result of the phaseout of older, noisier airplanes ("Stage 2"). Since the phaseout occurred on schedule and is now 100% complete, the numeric goal is being met. In the future, FAA will report on results using a new, more accurate methodology to assess the number of people exposed to significant levels of aircraft noise around airports. The model development is being done in conjunction with the Committee on Aviation Environmental Protection (CAEP) under ICAO.

At the end of 1998, airplanes that met the most stringent FAA noise standard (Stage 3 airplanes) comprised 86.9 percent of the total fleet of large civil subsonic turbojet airplanes, compared to an estimated 45 percent in 1990 when Congress enacted ANCA. After December 31,

1999, all civil jet airplanes over 75,000 lbs. and operating in the contiguous U.S. met the Stage 3-noise standard.

Population growth, shifting population density, urban development around airports, and increasing flight activity have all impacted our ability to meet this goal. These factors have generally increased the numbers of people potentially exposed to aircraft noise. A positive factor in lowering noise exposure has been aircraft fleet recapitalization within the industry. Updated airline fleet data for 1998 indicate a higher than expected introduction of airplanes that have been "hushkitted" to comply with the Stage 3 noise standard.

Activities in 1999 included funding for noise reduction activities such as the soundproofing of residences and buildings used for educational or medical purposes in the vicinity of airports, the purchase of buffer zones around airports, and noise reduction planning.

FAA also monitored the annual Stage 2 phase out compliance plans of the airlines and produced an annual report to Congress on the progress.

FY 2000 Performance Plan Evaluation: To estimate the number of people exposed to significant aircraft noise, FAA uses a statistical modeling technique using data from the 250 largest civil airports with jet operations in the U.S. FAA is currently updating the model with additional results from individual airport studies to produce more accurate results. While the downward trend will not change, the new model may indicate higher numbers of residents exposed to aircraft noise. Using the new model, the FAA will generate a new trend line for the period from 1995 through 1999 and recalibrate the goals for 2000 and 2001.

Strategies and Initiatives to Achieve 2001 Goal: DOT pursues a program of aircraft noise control in cooperation with the aviation community through noise reduction at the source (development and adoption of quieter aircraft), soundproofing and buyouts of buildings near airports, operational flight control measures, and land use planning strategies.

- The FAA's Airport Improvement Program will continue to provide funds for such noise reduction activities as the soundproofing of residences and buildings used for educational or medical purposes near airports, purchase of buffer zones around

airports, and noise reduction planning (\$224 million).

- The FAA will continue to develop noise research and assessment technologies (\$1.2 million).
- FAA Air Traffic Services will implement operational flight control measures to help reduce neighborhood exposure to aircraft noise.
- FAA will continue examination and validation of the methodologies used to assess aircraft noise exposure (\$3.9 million).
- DOT will develop a research plan and program for international certification noise standards for turbojet airplanes that will be more stringent than the current Stage 3 standards.

Other Federal Programs with Common Outcomes:

FAA is engaged with NASA in joint noise reduction technology research. The research objective is to identify technological concepts to reduce community noise impact of future subsonic jet airplanes by approximately half (7 to 10 decibels), relative to 1992 technology, by the year 2001.

MARITIME OIL SPILLS: A large share of the U.S. economy is fueled by oil. Over half of the oil that is used in the U.S. today is imported, and most of the imported oil is carried aboard tankships. While the design of these ships has improved substantially over the past few decades, accidents like the *Exxon Valdez* oil spill in Alaska illustrate the enormous magnitude of the environmental effects and potential economic effects when there is an accident.

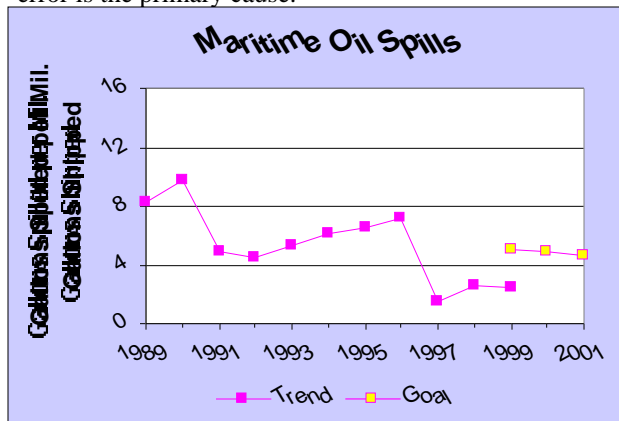
Performance Goal & Result

Performance Measure: Gallons spilled per million gallons shipped, by maritime sources.

Goals:	1999	2000	2001
	5.04	4.83	4.62
Actual:	2.38*		

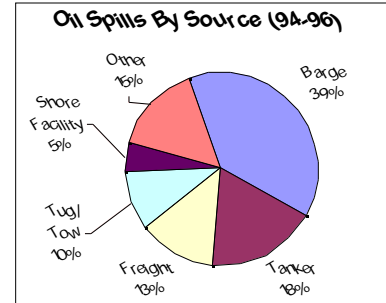
* 1999 Preliminary Data

External Factors: Over 90% of the oil spilled into U.S. waters results from only a few large spills. Tank ships and barges are the leading sources of spills, and human error is the primary cause.



1999 Results: Preliminary data indicates we exceeded our goal for reducing the amount of oil spilled to 5.04 gallons per million gallons shipped; the preliminary rate is 2.38. The oil spill rate has been variable over the long term: rising in 1993 to 1996 but dropping significantly in 1997 through 1999. The number of major and medium oil spills has decreased significantly from pre-1990 levels. Historically, major- and medium-size oil spills are few in number, but account for about 97 percent of the total volume of oil spilled in a given year. Tank barges and tank ships are the leading sources of major and medium spills. Our partnerships with American Waterways Operators, International Association of Independent Tanker Owners and the Baltic and International Maritime Council seek to reduce tank and barge spills. As a result of reducing tank and barge spills, the overall average number of oil spills over 10,000 gallons has dropped by about 50 percent from pre-1991 levels. Volume of oil spilled has also dropped by about 50 percent.

FY 2000 Performance Plan Evaluation: The goal for FY 2000 remains realistic within the longer-term trend. Although the spill rate for FY 1999 was significantly lower than the target, the occurrence of major spills in FY 2000 could easily result in a spill rate above the target. Therefore, the Coast Guard will continue to work to reduce the risk of oil spills, and maintain the low spill rate over the long run.



Strategies and Initiatives to Achieve 2001 Goal: DOT aims to reduce oil spillage by developing standards and regulations – and enforcing those requirements – for the transport of oil by ship or barge, and for transfer operations to shore facilities. Requirements address vessel characteristics, equipment and personnel qualifications; as well as methods of operation.

- The Coast Guard's Marine Environmental Protection programs target both prevention and response. The Coast Guard develops pollution prevention standards, enforces pollution regulations, and educates mariners on pollution prevention strategies and procedures. It employs the "Prevention through People" philosophy to identify the human causal factors in pollution incidents and focus on education of mariners and industry to reduce these factors. It investigates pollution accidents and analyzes the cause for remedial action. The Coast Guard also maintains vessel traffic systems, and aids to navigation systems to reduce the risk of collisions and groundings that may result in a pollution incident. (\$365 million)
- Through its Marine Inspection program, Coast Guard will inspect and certify U.S. ships carrying oil, and examine foreign ships for compliance with international treaty requirements. Coast Guard will continue to lead the U.S. delegation to the International Maritime Organization, Marine Environmental Protection Committee – to improve international standards in ship design and operations.

- Through its investigations and response operations, the Coast Guard analyzes the causes of accidents for remedial action. It may also suspend or revoke licenses and documents, and assess civil penalties for violations.
- Coast Guard plans to develop regulations to implement provisions of the Oil Pollution Act of 1990 that require operators to have an approved response plan.
- Through regulation, the Coast Guard will establish a numbering system for barges to allow identification of their owners and help prevent abandonment of barges that become pollution hazards.
- The Coast Guard, in cooperation with MARAD, will implement the new International Maritime Information Safety System (IMISS), a voluntary system for gathering and analyzing information from incidents that are not categorized as accidents (i.e., “near misses”). This will allow the maritime community to take steps to correct unsafe practices before they result in pollution-causing accidents. (\$398,000)

Other Federal Programs with Common Outcomes:

The Coast Guard is the lead agency for oil pollution prevention and response in the coastal maritime zone, while EPA is the lead for inland waters; each agency may take immediate action as first Federal official on-scene for any accident. The National Transportation Safety Board investigates some major marine casualties that result in oil spills (for safety purposes), in coordination with Coast Guard investigations. The Coast Guard participates in a multi-agency workgroup to establish common or complementary goals for clean water.

FISHERIES PROTECTION: The oceans, and especially the Exclusive Economic Zone (EEZ) of the U.S., are major sources of renewable wealth – providing a livelihood for commercial fishermen, a vast supply of food, and recreation. Commercial and recreational fisheries contribute about \$50 billion annually to the U.S. economy. The Sustainable Fisheries Act mandates a reduction in the number of over-fished stocks.

Performance Measure: Compliance rate with Federal fisheries regulations.

Goals:	1999	2000	2001
	95%	#	#
Actual:	98%		

Performance Measure:

Original: Percentage of species that are designated as overfished (Includes all areas where Coast Guard has enforcement responsibility in fisheries management plans).

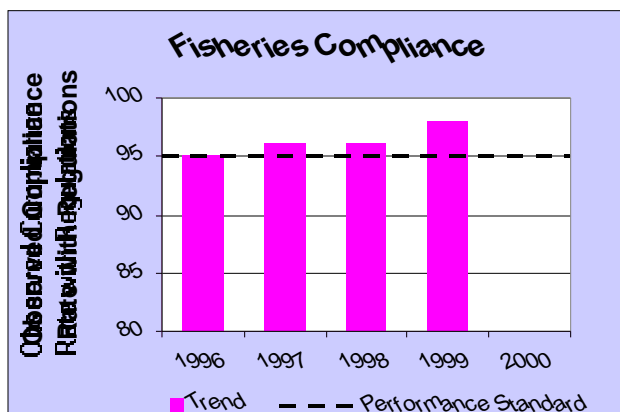
Revised: Percent change in number of species that are designated as overfished (Includes all areas where Coast Guard has enforcement responsibility in fisheries management plans).

Goals:	1999	2000	2001
	---	-8%*	1%
Actual:	N/A		

Performance measure changed after 1999.

* Goal was not included in FY 2000 Performance Plan

Note on Revised Performance Measure: The original performance measure tracked the percentage of species over-fished, but as the National Sustainable Fisheries Services (NMFS) continues to revise its data in its assessment of over-fished stocks, tracking the percent change in the number of species will provide a more accurate assessment of progress. See Appendix I for more information.



External Factors: Maintaining fish stocks is a complex management challenge. There are many factors that

influence the viability of fish stocks, but we influence only one of these factors through at-sea enforcement of management plan regulations. The economic health of the fishing industry, especially as more strict fishing limits are imposed, may create pressure to fish beyond those limits. Environmental factors may separately affect the health of the fish stocks either positively or negatively. Also, errors in scientific estimates may affect both the fisheries management plans and the measure of success.

1999 Results: We exceeded our original goal – maintain a 95% fisheries regulation compliance rate. The actual rate was 98%. This goal is now a secondary measure.

We have adopted a new goal that aligns our measurement with the Sustainable Fisheries Act. Under SFA, the National Marine Fisheries Service (NMFS) works toward fisheries sustainability, and reports on the number of fish stocks "over-fished" or "approaching over-fished" status. The most recent report lists a record 98 species as over-fished. Of those, we have some level of enforcement responsibility for 84 species.

The number of over-fished stocks rose from 1998 to 1999, due mostly to reassessments of fish stock status using a new definition of over-fished status created by the SFA. In 1999, 2 species over which the Coast Guard had enforcement authority improved in health and were removed from over-fished status. However, the Coast Guard can currently only cover approximately 60 percent of the management plans it should be enforcing. (All over-fished species are protected by federal regulation and the Regional Fisheries Management Councils management plans.) Management plans reflect the actions needed to meet performance goals established in the SFA. Coast Guard enforcement of these regulations is critical to achieving SFA outcomes.

There was a significant increase in foreign fishing vessel incursions in 1999: there were 9 incursions in 1998 and 92 in 1999. This is probably the result of a poor northern Pacific-fishing season that pushed more vessels toward illegal fishing, and our increased observation of the U.S.-Russian maritime boundary that enabled us to see more incursions. In addition, a great deal of the incursions occurred along the Gulf of Mexico maritime border with Mexico, but they involved small Mexican fishing boats that do not have the significant economic and biological

impact that the large foreign factory ships have along the northern Pacific maritime boundary with Russia.

FY 2000 Performance Plan Evaluation: There was no FY 2000 goal for this measure in the DOT Performance Plan. The Coast Guard has since set a FY2000 goal that mirrors the National Marine Fisheries Service goal, to limit the growth in the number of species within the Fisheries Management Plans designated as overfished to 8%.

Strategies and Initiatives to Achieve 2001 Goal: DOT aims to help achieve the national goals for fisheries by enforcing NMFS regulations, as outlined in the Magnuson-Stevens Fishery Conservation Management Act and as specified in regional fisheries management plans. In developing fisheries management strategies (with input from the Coast Guard), NMFS has identified enforcement of regulations as critical in maintaining the viability of fisheries and improving the health of overfished stocks. In order to manage enforcement activity and ensure that regulations have the intended impact, the Coast Guard monitors regulation compliance rates. This is a critical strategy for reaching the final outcome - healthy fish stocks. To improve patrol effectiveness, the Coast Guard is working with NMFS to implement a nationwide Vessel Monitoring System (VMS). VMS will not replace patrol efforts, because it cannot detect illegal nets or undersize catch, but it is effective for monitoring closed areas.

In FY 2001, the Coast Guard will address the large expansion of closed fishing areas and the long-term decline of U.S. fisheries. It will:

- Monitor high threat areas, intercepting suspects that are detected, and stop violations in progress.
- Increase the capability of its aircraft and ships, particularly sensors, to increase the effective law enforcement presence.
- Enforce regulatory measures regarding ballast water management and examine alternatives to current ballast water protocols (thermal, filtration, and chemical cleansing systems) to protect native fisheries and other living marine resources from harm by invasive species.
- Deploy additional effort to support the Ocean Guardian strategic fisheries plan, with added protection for the U.S. Western Pacific EEZ, and integrate VMS information into enforcement operations. (new funding of \$1.9 million)

- Implement the Atlantic Protected Living Marine Resources Initiative, and implement initiatives to reduce ship collisions with whales.

Other Federal Programs with Common Outcomes:

The Sustainable Fisheries Act of 1996 sets national goals for the reduction of currently over-fished stocks and maintenance of all fish stocks at a sustainable level. NMFS and the Coast Guard play major roles in achieving these objectives. NMFS conducts the scientific assessments of stock health, oversees the development of regional fisheries management plans to sustain that health, and conducts shoreside enforcement of regulations. The Coast Guard provides the at-sea enforcement of management plan regulations that are necessary for sustainable fisheries. The Coast Guard regularly meets with NMFS and the regional fisheries councils to coordinate activities and provide expertise on enforcement issues. The Coast Guard also coordinates activities with governments that have enforcement responsibilities.

HAZARDOUS MATERIALS SPILLS: More than 616 billion ton-miles of petroleum and other hazardous liquids move across the country by pipeline. While this is usually the least costly way to transport these bulk cargoes, it also entails some risk. Because of the volume of liquid hazardous materials moved by pipelines, any spill into the environment is potentially a significant one.

Performance Goal & Result

Performance Measure: Tons of hazardous liquid materials spilled per million ton-miles shipped by pipelines.

Goals:	1999	2000	2001
	.0171	.0161	.0151
Actual:	.0222		

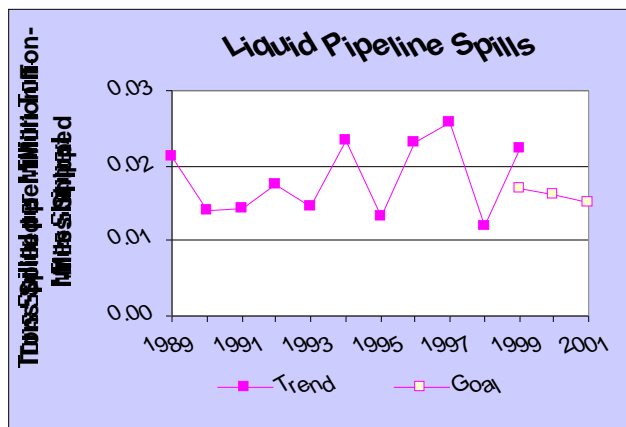
Performance Measure: Gallons of hazardous liquid materials spilled (non-pipeline) per serious transportation incident.

Goals:	1999	2000	2001
	2,046	#	#

Actual: 2,237

Discontinued measure in DOT Plan after 1999.

External Factors: Prevention and mitigation of pipeline spills requires improved site-specific knowledge of water and sensitive environmental areas to provide tailored actions to first prevent leaks, and, if they do occur, assure that appropriate and timely response is undertaken.



1999. The trend of the 1999 goal for hazardous materials (pipeline and non-pipeline) spills was met. In 1998, the spill rate for pipeline hazardous liquid materials reached a ten-year low of .0118 tons per million ton-miles shipped. In 1999 the spill rate rose compared to the 1998 level but may have simply returned to the previously expected level in line with the trend throughout the 1990's. The data oscillates over time with a general downward trend. Because there is a high degree of variability in the data we will closely examine the performance of the measure over time to validate the merit of this measure in its current form.

Because we did not reach our 1999 goal for this measure, we are analyzing the data on hazardous material spills to identify target areas where further improvements might be made.

The average spill size of hazardous liquids transported by means other than pipeline was 2,237 gallons in 1999—9.3% higher than RSPA's goal of 2,046. The average amount released per incident by mode is: Air - 1 gallon, Highway - 1,678 gallons, Rail - 6,261 gallons. One third of the total material released in serious transportation incidents is attributed to just six incidents. Discounting these six incidents, the average spill size for the remaining serious transportation incidents is 1,536 gallons, well below RSPA's goal. These results remain in line with general trends over the 10-year period and reflect the variability of incident consequences.

1999 activities included a pilot test of the new American Petroleum Institute (API) voluntary industry pipeline information system, created with joint industry/state/Federal input and participation. The API voluntary information system will provide data on much smaller spills than captured by the current threshold for federal spill reporting, providing better trending information, information about precursors to leaks, and better information about the impacts to the environment and the effectiveness of remediation efforts.

The Office of Pipeline Safety (OPS) continued to work closely with the Coast Guard and the Environmental Protection Agency in implementing the Oil Pollution Act of 1990 as it applies to onshore oil pipelines. Efforts are aimed at decreasing the likelihood of pipeline spills, diminishing the environmental consequences of spills, and ensuring that the responses to spills are swift and well planned. Operators are required to develop response plans, test their plans in exercises, and implement their plans in actual responses.

RSPA also worked in 1999 to increase awareness of one-call centers to reduce excavation damage to pipelines.

Another effort that contributed to reducing the impact of spills on the environment is RSPA's work to define and identify areas unusually sensitive to environmental damage. By identifying where spills have the most potential for costly impact to the environment and consequently targeting efforts to improve structural

integrity in those areas, we maximize resources spent in making system improvements.

FY 2000 Performance Plan Evaluation: To address 1999 results that fell short of our pipeline target, RSPA will:

- Begin inputting data into our National Pipeline Mapping System (NPMS) for the first time in FY 2000, with an expected 70% of the nation's pipeline location information to be provided by industry on a voluntary basis. The NPMS will provide a tool for identifying the risk pipelines pose to people and the environment.
- Improve inspection methodology by moving to a system wide approach to evaluating pipeline integrity utilizing risk management concepts to target those pipelines with the highest risks for spill prevention and remediation activities.
- Examine pipeline operator's worse case spill scenarios to see where improvements might be made to mitigate large spills.

Strategies and Initiatives to Achieve 2001 Goal: DOT aims to prevent spills by working with operators to classify and address the threats of spills, particularly in environmentally sensitive areas. DOT also works to reduce the consequences of spills through a consultative process with the pipeline industry and other stakeholders, to improve and test response plans through practical exercises. New regulatory efforts will focus on risk.

- RSPA's Pipeline Safety program impacts both Safety and the Environment. The Safety Goal measure for pipeline failures includes all Pipeline Safety funding for FY 2001 (\$47 million, \$10 million more than FY 2000 levels). Approximately \$14 million of this will support accomplishment of this performance goal.
- RSPA will continue to work with the pipeline industry with our System Integrity Inspection program to improve the efficiency and effectiveness of pipeline inspections through a cooperative effort to identify each operator's highest risk pipeline segments and focus resources on those areas.
- RSPA will continue its cooperative effort with industry to develop a nationwide map of natural gas and hazardous materials pipelines and facilities, including information on attributes of these facilities, in our NPMS.
- RSPA's information, inspection, training and analysis initiatives will look toward making its risk-

based strategy more effective in reducing pipeline spills.

- RSPA will review operator spill response plans, oversee field and table-top exercises to strengthen operator readiness to respond to oil spills from pipelines, and monitor major spills and remediations.

Other Federal Programs with Common Outcomes:

RSPA will work to reduce the frequency and the size of spills by working with the Federal Energy Regulatory Commission, The National Oceanic and Atmospheric Administration, The Department of Energy, the U.S. Geological Survey, and others that will help us analyze risks to environmentally sensitive and populated areas through creation of our National Pipeline Mapping System. We also are working with the National Association of Pipeline Safety Representatives and trade associations such as the American Petroleum Institute, and other industry partners in designing new reporting systems and data improvements.

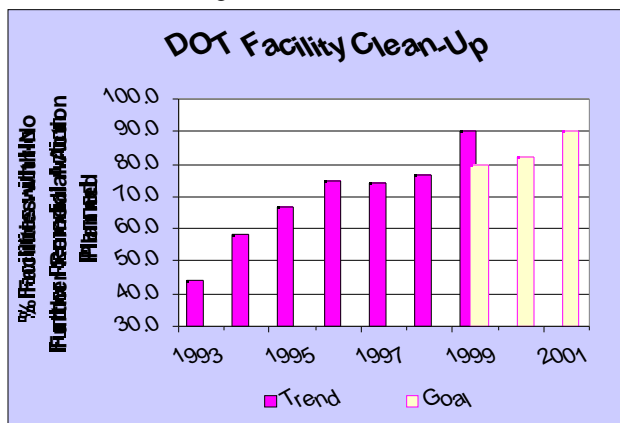
RSPA is working with the Environmental Protection Agency, the Department of Interior, and other natural resource trustees, environmental organizations, and the public to identify drinking water and ecological resources that are unusually sensitive to environmental damage from spills. We have completed our Drinking Water Data Catalog as part of an environmental index initiative and have added the catalog to our web site, <http://ops.dot.gov>.

DOT FACILITY CLEANUP: As a lead agency for environmental programs, DOT has a special responsibility to ensure that its own facilities are compliant with environmental laws and regulations. Restoration activities involve identifying, investigating, and cleaning up contaminated sites. Compliance activities involve present-day operation of facilities, equipment, and vessels in accordance with environmental requirements. Pollution prevention activities involve preventing future cleanup activities by avoiding the generation of pollutants in our operations or facilities in the first place.

Performance Measure: Percentage of DOT facilities categorized as No Further Remedial Action Planned (NFRAP) under the Superfund Amendments and Reauthorization Act (SARA).

Goals:	1999	2000	2001
	80%	82%	91%
Actual:	90%		

External Factors: Future progress may be slower as the remaining sites, although progressively lower in risk, are often larger and more difficult to clean. The Environmental Protection Agency (EPA) has the authority to reactivate previously NFRAP sites, and new sites may be identified. Also, requirements may change as laws and resulting regulations change to reflect new research and findings.



1999 Results: The percentage of DOT facilities classified as No Further Remedial Action Planned (NFRAP) has increased by 12% over 1998. By the end of FY 1999, almost 90% of the sites received this level of designation after cleanup and remediation.

USCG continued remediation at LORAN Station, St. Paul, AK; Support Center Elizabeth City, NC; and Support Center Kodiak along with other smaller sites. Additionally, the Coast Guard made progress on the ATON Battery recovery program and commenced the long process of PCB removal from its' decommissioned vessel fleet.

The FAA maintained its progress in remediating their facilities in 1999. Over 90% of FAA's facilities on the Docket now have been categorized as NFRAP. The

remaining six facilities are in process of remediation or are awaiting EPA determination of NFRAP status. Most of the FAA facilities on the Docket are located in the Alaskan Region, where 55 of 58 listed facilities have achieved NFRAP compliance. Additional information has been provided to EPA for the remaining three facilities in the Alaska Region and the FAA has now included EPA in coordination meetings regarding cleanup activities for the Annette Islands Indian Reserve. Investigations and field work continues at all 58 Docket facilities in the Alaska Region per regulations of the Alaska Department of Environmental Conservation. The FAA Aeronautical Center has begun monitoring well decommissioning activities for the Fuel Transfer Station Area and Base Maintenance Area and the FAA Technical Center has initiated a PA/SI to begin characterization of identified mercury contamination.

FRA has four designated facilities. EPA has determined that no further remedial action is necessary at two of these facilities. The remaining two facilities are part of the Alaska Railroad, which was owned by the federal government until January 5, 1985, when it was transferred to the state of Alaska in accordance with the provisions of the Alaska Railroad Transfer Act. Notwithstanding the transfer of ownership, the Standard Steel and Metals Salvage Yard and Arctic Cooperage are being remediated as Federal facilities. Cleanup of contaminated soil at the Standard Steel and Metals Salvage Yard was conducted during the 1999 construction season. Efforts are underway to determine the nature and extent of contamination at the Arctic Cooperage.

FHWA has one designated facility. EPA has determined that no further remedial action is necessary at this site. However, due to contamination in the source area, additional field work was required by the state. This field work began during the summer of 1998 and is scheduled to continue through the summer of 2000. Based on the results of this field work, the corrective measures plan will be revised and a final remediation solution recommended.

FY 2000 Performance Plan Evaluation: The 90% goal, originally targeted to be met in FY 2001, was achieved ahead of schedule in FY 1999. However, progress

beyond the 90% level will be slower because the remaining sites, though lower in risk, are larger and more difficult to clean.

Strategies and Initiatives to Achieve 2001 Goal:

Facility cleanup will comply with the Superfund Amendments and Reauthorization Act (SARA) process and the requirements of the National Oil and Hazardous Substances Pollution Contingency Plan. A “worst first” prioritization system is used to assign highest priority to those facilities representing the greatest potential hazard to the public health and the environment. Regulatory factors at the local, state, and Federal levels are also considered in the decision making process.

- USCG will spend \$16.9 million to continue remediation activities at major sites in Base Kodiak, AK; Air Station Elizabeth City, NC; and Air Station Cape Cod, MA; along with other smaller sites. In addition, USCG will also continue Aids to Navigation battery cleanup at sites throughout the U.S. and removal of PCBs from Coast Guard cutters.
- FAA will conduct compliance and cleanup activities at identified sites, maintaining mandatory schedules for the Alaskan Region, the Aeronautical Center, and the Technical Center. (\$22.6 million). FAA will also do normal life-cycle replacement of outdated fuel tanks with newer, higher standard tanks; registration and testing of tanks; and investigation, removal of tanks and clean-up at decommissioned facilities (\$10.5 million). FAA has an ongoing program to maintain air traffic control towers in compliance with environmental regulations including energy management. Funds are provided for environmental assessments and physical modification to ensure compliance (\$28.4 million).
- FRA will continue to work with the Department of Justice to resolve state issues at the two formerly owned facilities in Alaska.
- FHWA will continue work at one facility to meet the legal requirements of the involved State.

Management Challenge – Ship Disposal

Ship disposal is a management challenge separate from DOT’s goal to clean up its shore facilities. The Maritime Administration (MARAD) must dispose of government-owned, obsolete merchant and non-combatant vessels in the National Defense Reserve Fleet (NDRF). Law requires that this be done in a manner that maximizes financial return to the U.S. MARAD used to sell the vessels overseas for scrapping. Since 1995, MARAD has refrained from

exporting these vessels because of concerns about the environment, worker health and safety. As a result, MARAD has incurred additional costs to maintain the ships prior to their sale and disposal in the U.S., where there is only a small domestic ship scrapping industry.

The Federal Government faces a challenge in disposing of its obsolete vessels in a timely manner. The requirement to maximize financial returns in their disposal may not work in today’s marketplace. MARAD will likely need relief from this law. Furthermore, the limited domestic market may not support the number of Navy and MARAD vessels awaiting disposal.

In FY 1999, the NDRF contained 110 vessels designated for disposal. These obsolete vessels are deteriorating, contain hazardous substances, and pose an immediate environmental threat. MARAD expects its inventory of obsolete vessels will increase by 2001 if no additional vessels are sold by that time.

To judge their progress in managing the ship disposal program, MARAD has set a performance goal to reduce the inventory of obsolete vessels in the NDRF. The FY 2001 target will be determined once a viable, and legal, solution has been developed for disposal of the ships.

These key points are further identified in OIG Report no. MA-2000-067, March 10, 2000.

Other Federal Programs with Common Outcomes:

The DOT performance measure for this program is based on EPA standards and is in line with government-wide efforts under SARA.

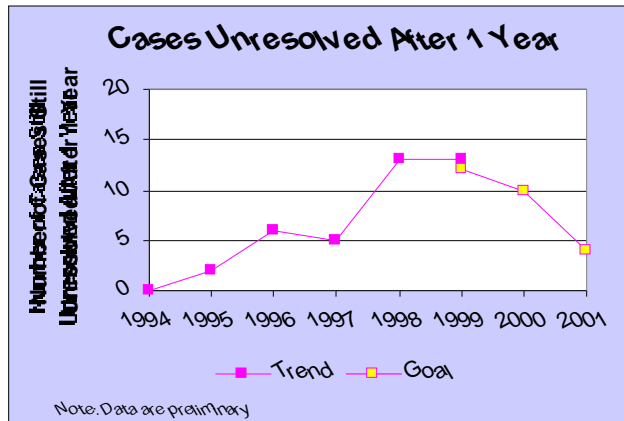
ENVIRONMENTAL JUSTICE: On February 11, 1994, President Clinton issued Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. This Executive order directs each Federal agency to “make achieving justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations.” The EO and accompanying Presidential Memorandum emphasize that agencies should utilize existing laws, such as the National Environmental Policy Act (NEPA) and Title VI of the Civil Rights Act of 1964, to achieve this mission. The Department issued its own EJ Order in February 1997, which provides that it is the policy of the Department to promote the principles of EJ through the incorporation of those principles in all DOT programs, policies, and activities.

Performance Goal & Result

Performance Measure: Number of environmental justice cases that remain unresolved for over one year.

Goals:	1999	2000	2001
	12	10	4
Actual:	13		

External Factors: Prompt resolution of EJ/Title VI complaints is an important part of meeting EJ objectives, but is complicated by lack of federal statutory protections for people on the basis of income, as well as the problem of making a direct link between the cause and the harm. There is also the problem of trying to determine whether a planning decision has been made on the basis of economics or is a case of intentional discrimination.



1999 Results: Despite an increase in the number of complaints filed, the number of complaints over one year old at the end of FY 1999 was 13, the same as FY 1998.

EJ is a relatively new field, there is little experience in investigating and resolving EJ complaints. In addition, this program is complex because of the confluence of Civil Rights Laws and Environmental Laws. There is interplay of various statutory authorities such as the Civil Rights Act, NEPA, and the Clean Air Act (CAA). In late 1999, DOT reviewed the number of EJ complaints and issues it had, including reviewing databases, and actually

revised the number of open, pending EJ complaints downward.

An external factor that has complicated the speedy resolution of EJ cases is the long planning process of transportation infrastructure projects--20 years or more. The point where third parties seek to intervene in such processes by making EJ allegations varies, and can lead to lengthy resolution efforts. Investigation and resolution of issues often has involved mediation between multiple parties.

FY 1999 activities included stakeholder partnership meetings with civil rights groups and environmental activists, Atlanta's metro planning organization, and governmental representatives in the Atlanta area. This model effort included development of a workplan in response to a threat-to-sue letter on Clean Air Act grounds that included EJ issues. In addition, DOT gave presentations at several conferences on EJ, including Portland, Oregon and Hilton Head, South Carolina. DOT participated in two EJ community meetings sponsored by the Council on Environmental Quality in New York City and Los Angeles. A DOT Flagship Team was established on EJ, headed by the Office of the General Counsel. FHWA contracted for development of a publication on "Environmental Justice and National Environmental Policy Act Process for Federal Highway Administration." FHWA and FTA issued proposals for streamlining their NEPA and environmental regulations, explicitly including EJ and Title VI of the Civil Rights Act of 1964 language. Late in the year, FHWA and FTA issued guidance to their regional offices on how to include EJ and Title VI in certification reviews of metropolitan planning organizations. FAA began revising its NEPA guidance to include EJ and conducting compliance reviews under Title VI.

FY 2000 Performance Plan Evaluation: Based on program performance in FY 1999, we expect to achieve the goal set in the FY 2000 performance plan.

Strategies and Initiatives to Achieve 2001 Goal: DOT works with stakeholders and officials at the state and local levels to ensure that environmental justice concerns are integrated into the transportation planning process.

To counter the factors that delay resolution, DOT employs two strategies: 1) emphasizing public involvement by minority and low income communities at a very early stage of transportation project planning; and 2) encouraging improved analysis by metropolitan planning organizations (MPOs) and state DOTs of the potential equity impacts of transportation projects.

- DOT will educate stakeholders, provide Title VI training, and ensure public participation in the concept stage -- before project designs are chosen -- by reaching out to potentially affected populations.
- DOT will participate in the Interagency Working Group on Environmental Justice (IWG) and its successor group, and examine DOT's process for the National Environmental Policy Act (NEPA) and other environmental laws to integrate EJ.
- DOT will also develop tools for making equity determinations and analyses in transportation planning by MPOs. We will build capacity and multiply effects by helping other levels of government identify and address potential noncompliance.
- DOT has formed an EJ coordinating council with representatives from all operating administrations and several Secretarial Offices to examine how all components of DOT can work together to resolve EJ issues.
- FHWA and FTA will add EJ considerations to the joint planning regulations for federally funded road and public transit projects.
- DOT will continue to work with transportation authorities, and environmental and community groups, in the Atlanta area to address EJ concerns, and low income and minority service needs, in regional transportation planning. Atlanta offers a possible model approach to EJ issues and concerns.

Other Federal Programs with Common Outcomes:

DOT will work with other agencies to share expertise and resolve jurisdictional overlaps and duplications, principally through the Interagency Work Group, chaired by EPA.

The national goal of the Administration's EJ initiative, as described in the EJ Executive Order and accompanying Presidential memorandum, is to reduce, prevent, and eliminate high and adverse environmental and health effects of federal projects and activities on minority and low income communities. All federal agencies that have projects and activities with possible environmental or health effects are involved in this activity. The role of DOT in achieving the national goal is to assure that

projects and activities, including those funded, regulated, and approved by DOT in the transportation segment of the national economy and infrastructure, do not have the prohibited effects and other discriminatory effects. Crosscutting efforts with other related federal programs are coordinated through meetings of the Interagency EJ Working Group and its successor Task Force; case-specific meetings with other agencies; meetings called by DOJ to coordinate federal civil rights efforts; review of and comment on proposed legislation, regulations, and testimony, as circulated by OMB; information sharing; reviewing and taking into consideration comments on environmental impact statements and similar documents; and informal professional and network contacts. DOT performance measures and annual targets have not been coordinated with the other agencies because DOT is further advanced in its efforts than the other agencies. However, treatment of goals on specific cases have been coordinated with other involved agencies such as HUD and DOJ. In addition, DOT has provided assistance to other agencies.

DOT also works with the Department of Justice on legal guidance, the Council on Environmental Quality, the Corps of Engineers (on wetlands permitting), U.S. Navy (MARAD joint interests in the National Defense Reserve Fleet and ports), and the Departments of Interior (Native American issues and FAA national parks flyover issues), Energy (hazardous materials rail transport through Indian Nations), Health and Human Services (poverty statistics, minority health, and coordinating human services transportation), and Housing and Urban Development (public transit issues).

DIRECT ENVIRONMENTAL PROGRAMS				
Estimated Obligations (FY 1999-2001), in millions				
3/17/00				
		<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
		<u>Actual</u>	<u>Estimated</u>	<u>Request</u>
OFFICE OF THE SECRETARY		0	0	0
TPR&D	(Environmental projects)	0	0	0
COAST GUARD		891	1,001	1,091
Marine Env. Protection	Operations	303	340	365
	Acquisition	10	52	69
	Research	3	3	3
ELT (Fisheries)	Operations	399	483	515
	Acquisition	29	43	58
	Research	2	2	2
Oil Spill Cleanup		69	61	61
Facility Compliance & Restoration		23	18	18
FEDERAL AVIATION ADMINISTRATION		329	309	292
Airport Grants	(Noise-reduction)	215	259	224
Environment & Energy	(Noise-reduction)	3	3	8
Facility Compliance & Restoration		51	47	60
FEDERAL HIGHWAY ADMINISTRATION		1,830	2,301	2,318
Federal-aid Highways	CMAQ	1,145	1,509	1,551
	Transp Enhancements	631	686	719
	Community Preservation	14	35	52
	Recreational Trails	40	12	50
FEDERAL TRANSIT ADMINISTRATION		-	-	100
Clean Fuels Program		-	-	100
MARITIME ADMINISTRATION		8	8	8
Operations and training		8	8	8
RESEARCH & SPECIAL PROGRAMS ADMIN.		9	10	14
Advanced Vehicle Program (funded in FHWA)		110	5	120
Human Factors (funded in FHWA)		-	-	13
Pipeline Safety (liquid)		9	10	14
TOTALS		3,013	3,630	3,883

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STRATEGIC GOAL: NATIONAL SECURITY

Advance the nation's vital security interests in support of national strategies such as the National Security Strategy and National Drug Control Strategy by ensuring that the transportation system is secure and available for defense mobility and that our borders are safe from illegal intrusion.

Transportation provides the vital, strategic mobility of materials and forces in times of national emergency, contributing to the nation's security. And the Department of Transportation provides unique resources in the Coast Guard for national defense. But the transportation system is also vulnerable to intentional harm, and our borders are vulnerable to intrusion through smuggling of contraband and illegal migrants. DOT's objective is to advance the benefits of transportation to our national security while minimizing the vulnerability of our nation to disruption, damage, or exploitation through the transportation system.

The FY 2001 budget proposes \$1.6 billion in direct national security funding to meet these challenges – an increase of 8 percent from 2000.

We Aim To Achieve These Strategic Outcomes:

- Reduce the vulnerability and consequences of intentional harm to the transportation system and its users.
- Ensure readiness and capability of all modes of commercial transportation to meet national security needs.
- Ensure transportation physical and information infrastructure and technology are adequate to facilitate military logistics during mobility, training exercises, and mobilization.
- Maintain readiness of resources including operating forces and contingency resources owned, managed, or coordinated by DOT necessary to support the President's National Security Strategy and other security-related plans.
- Reduce flow of illegal drugs and of illegal aliens entering the United States.

This section includes a Performance Progress Report for 1993-1999. Alongside our 1999 results, we note if the target (goal) was met. If the goal was missed but recent data show the trend responding in a good direction, we note that important result. A detailed analysis of performance results for 1999 and our strategies and initiatives for 2001 follows the Performance Progress Report. Our discussion of National Security concludes with a presentation of National Security Program Direct Spending

PERFORMANCE MEASURES:

Aviation security
Critical infrastructure protection
Sealift capacity
Mariner availability
DOD-designated port facilities
Ready Reserve Force (RRF) activation
Military Readiness (USCG)
Drug interdiction
Migrant interdiction

PERFORMANCE PROGRESS REPORT: NATIONAL SECURITY

NATIONAL SECURITY	1993	1994	1995	1996	1997	1998	1999	1999 GOAL	GOAL MET?	GOOD TREND?
Ship capacity (in twenty-foot equivalent units, or TEUs) available to meet DOD need	N/A	N/A	N/A	N/A	124,152	161,258	162,151	165,000		✓
Ship capacity (in million square feet) available to meet DOD's requirements for intermodal sealift capacity	N/A	N/A	N/A	N/A	12.3	14.2	14.3	14.5		✓
Percent of total mariners available to crew	N/A	N/A	N/A	N/A	N/A	N/A	123	100	✓	
Percent DOD-designated primary or alternate ports available when requested by DOD	N/A	N/A	74	62	60	93	93	90	✓	
Percent RRF no-notice activations that meet assigned readiness	100	95	100	100	94	100	100	100	✓	
Percent of days that RRF ships are mission capable while under DOD control	N/A	98.8	99.5	99.9	95.2	98.8	98.4	99		
Readiness rating for all high endurance cutters, patrol boats, and port security units	N/A	N/A	N/A	N/A	57	N/A	53	72		
Percent seizure rate of cocaine shipped through transit zone	6	5	6	5	16	10	12	12.2		✓
Percent success rate for undocumented migrants attempting to enter U.S. over maritime routes	N/A	N/A	25	8	6	9	13.3	13		✓

N/A= Not Available

AVIATION SECURITY: The United States and its citizens remain targets for terrorist groups seeking to challenge or influence international affairs. Although the number of terrorist incidents against aviation has been low, the potential losses are unacceptable. Because terrorists seek to destroy public confidence in the safety and security of air travel, the continued growth of commercial air transportation, tourism and world economies depends upon effective aviation security measures efficiently applied. However, the threat to civil aviation is not restricted solely to those motivated by political or social concerns. In addition to terrorism, we must also prevent other criminal acts regardless of motivation. Governments, airlines and airports must work together cooperatively to achieve our common goal: safe and secure air transportation worldwide.

Performance Goal & Result

Performance Measure: Detection rate for explosives and weapons that may be brought aboard aircraft.

Goals:	<u>1999</u>	<u>2000</u>	<u>2001</u>
	##	##	##

Actual: ##

Detection rates are sensitive information protected under 14 CFR Part 191. Performance goals and actual trend data will be made available to appropriate parties upon request.

External Factors: Technology and human vigilance must keep pace with the increasing sophistication of explosive devices, other weapons and the techniques terrorists or criminals may use to threaten air travel. At the same time, the speed of processing passengers and baggage through screening checkpoints and other security measures must improve to accommodate the rapid growth in passenger traffic. These challenges must be met while protecting civil liberties.

1999 Results: The performance goal for 1999 was not met because technology designed to improve the performance of screeners was not available as planned. FAA expects to deploy this new technology during FY 2000. Details of detection rates of simulated explosive and weapons at airports are sensitive security information. Results from testing indicate that screeners at security checkpoints are effective in detecting FAA test objects representing traditional weapons and explosive devices, but need improvement in detecting objects that represent certain improvised explosive devices.

External factors influencing 1999 performance include the tight current labor market and the low salaries and benefits for security screeners in the United States that may have inhibited the aviation industry's ability to attract and keep qualified security professionals. Use of advanced aviation security equipment is in its infancy. Government and industry are working together to use the lessons learned in these early stages to continually improve screener performance and increase effective use of equipment, while ensuring that civil liberties are properly protected.

In FY 1999, FAA activities in the following areas contributed to the goal of improving aviation security:

A total of 170 White House Commission on Aviation Safety and Security recommended voluntary consortia, whose membership includes airport operators, airlines, law enforcement, tenants, FAA security agents and other government officials, are established at U.S. airports and meet regularly to solve security problems.

FAA has purchased a total of 136 systems for screening checked baggage and 640 units for detecting traces of explosives in passengers' carry-on and checked bags, and deployed them to 80 U.S. airports. There are two certified explosives detection systems (EDS) from InVision Technologies and one expected from L-3 Communications, giving FAA and airlines a choice among vendors, encouraging competition.

The Omnibus Consolidated and Emergency Supplemental Appropriations Act of 1999 (P.L. 105-277) required that major air carriers agree in writing to assume operations costs for installed EDS and other technologies, and agree to pay maintenance costs after the end of vendor warranties and initial maintenance periods in U.S. Government contracts. Letters to this effect were received in late 1998, and early 1999, and Congress was notified by letter on January 25, 1999. FY99 procurements were delayed, but on March 31, FAA purchased 21 CTX-5500 EDS from InVision Technologies for \$18.9 million. Three were bought in June for \$2.7 million and seven in August 1999 for \$6.3 million. FAA also leased 30 advanced checkpoint x-ray units for operational evaluation that use a threat image projection system to monitor screener performance. If evaluation results are satisfactory, up to 420 x-ray devices may be purchased.

FAA deployed computer-based training (CBT) systems for screeners to provide high-quality, standardized training, realistic practice with all types of threats, and reduce overall training time. Thirty-seven airports are using the system.

In April 1999, FAA issued a Notice of Proposed Rulemaking on "Security of Checked Baggage on Flights within the United States." It would require airlines to use

an automated passenger prescreening system to select checked bags for screening by explosives detection systems or by subjecting them to "bag matching" to make sure the bags are not loaded on aircraft unless the passengers are on board. The Computer-Assisted Passenger Prescreening System (CAPPS) streamlines prescreening by automating the process, reduces the need for physical bag searches, and protects civil liberties by eliminating the human factor in passenger prescreening. More than 90 percent of the flying public already fly under this regime since all the major airlines and over 40 regional carriers are using CAPPS voluntarily.

Over 800 FAA special agents use labor intensive, but realistic operational testing and assessments along with surveillance and scheduled inspections to evaluate and improve airport and air carrier security and dangerous goods shipping operations. Agents unknown to industry personnel simulate criminal and terrorist tactics based on standard protocols, often using test results to educate screeners and supervisors on-the-spot.

FY 2000 Performance Plan Evaluation: Although the FY 1999 goal was not met, FAA will be deploy the new technology designed to improve the performance of screeners in FY 2000 and expects to be able to meet the FY 2000 goal.

The deployment of over 30 enhanced x-ray systems capable of automated testing should yield data for comprehensive insights into screener performance.

Strategies and Initiatives to Achieve 2001 Goal: DOT will continue implementing White House Commission on Aviation Safety and Security recommendations. FAA will continue research on better technology and procedures to keep weapons and explosive devices off aircraft, and will continue to purchase and deploy advanced aviation security equipment, monitor its use, and test and assess industry performance of required security program measures and directives. The certification of screening companies is expected to increase screener performance. FAA will continue to encourage airport security consortia. The performance-based approach to industry compliance with security requirements will encourage partnering to improve aviation security.

- FAA will continue to develop aviation security countermeasures, and assist U.S. and foreign air carriers who provide air service to the U.S. FAA will monitor and test the compliance of airports and air carriers with security requirements. (\$144 million).

- FAA will purchase advanced security equipment, including explosives detection systems for checked baggage, for use at airports across the Nation (\$100 million).
- FAA will continue and expand research and development to improve human factors and technology for detecting explosive devices and weapons and to decrease the vulnerability of airports and aircraft to security threats. (\$49.4 million).
- Regulatory initiatives include publishing the certification of screening companies rule, which should become effective during FY 2001. The rule will hold companies that perform aviation security screening to minimum performance standards for detecting simulated explosive devices or deadly weapons, thereby driving overall system performance to higher levels.
- FAA will continue airport and FAA facility vulnerability assessments as recommended by the White House Commission and Presidential Decision Directive 63.

Management Challenge – Aviation Security

FAA is committed to continuously improve aviation security. The management challenge facing FAA is to develop comprehensive procedures and technologies for effective, reasonable and prudent security measures for their partners in aviation security - airports, air carriers and screening companies – to implement.

To help judge their progress in meeting their responsibilities in aviation security, FAA has set these goals:

- Complete pending rulemakings to hold individuals accountable for compliance with access control requirements.
- Install a total of 120 explosive detection systems (EDS) for checked bag screening at U.S. airports by September 30, 2000.
- Accredite 75 facilities in accordance with the requirements of FAA Order 1600.69, Facility Security Management Program by September 30, 2001.
- By FY 2000, adopt and implement procedures to ensure that every FAA system is being assessed, certified and accredited as fully meeting security standards at least every 3 years.

Other Federal Programs with Common Outcomes:
Aviation security planning and security measures are

based on assessments from law enforcement and intelligence agencies, required by the Aviation Security Improvement Act of 1990 (P.L. 101-604). The Aviation Security Advisory Committee (ASAC) is an important partnership chaired by FAA where representatives of other federal agencies, law enforcement, airport operators, airlines, labor and consumer groups, and the families of victims of terrorism meet quarterly in public plenary or special sessions to exchange information and discuss ways to improve aviation security. FAA conducts joint airport vulnerability assessments with the Federal Bureau of Investigation, and works with the U.S. Customs and Postal Services to improve procedures and technology for cargo or mail screening. FAA and the Bureau of Alcohol, Tobacco and Firearms work together to improve the use of canines for explosives detection, and jointly sponsored "Seminars on Terrorism and Explosives" at which 1000 aviation industry employees and law enforcement officers were trained on explosives security topics.

CRITICAL INFRASTRUCTURE PROTECTION: The U.S. transportation system is one of the most developed in the world, covering a tremendous geographical area and numerous modes of travel. The system increasingly relies on information and telecommunication systems. Given our open society, this system is vulnerable to threats to destroy or degrade its infrastructure and performance. DOT has a three pronged approach to such threats: 1) through intelligence gathering and information sharing, we attempt to identify threat information and then communicate that information quickly to those who must act, 2) taking pro-active measures to protect DOT assets, and 3) working in partnership with industry to identify and counteract infrastructure vulnerabilities.

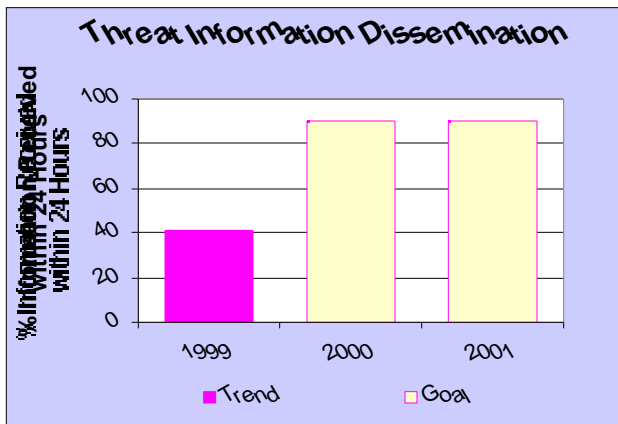
Performance Goal & Result

Performance Measure: Of those who need to act, percent that receive threat information within 24 hours.

Goals:	1999	2000	2001
	--- #	90%	90%
Actual:	41.5%		

No FY 1999 Goal set due to lack of baseline data

External Factors: The private sector or state and local agencies own and operate the majority of the nation's transportation infrastructure. Achievement of this goal relies on increased coordination and cooperative partnerships with private industry and law enforcement, and the willingness of industry to adjust security procedures based on threat information provided by DOT.



1999 Results: This measurement was not established until FY 2000. DOT spent FY 1999 developing a baseline with which to compare future years and revising internal and modal procedures to more efficiently distribute information.

Prior to FY 1999, DOT distributed relevant intelligence and security information via Information Circulars. Although these circulars were distributed to modal security representatives, who were asked to pass them to security contacts within industry and the field, no formal process was in place to ensure that they were reaching the intended end users in an expedient manner.

In FY 1999, Information Circulars were renamed Transportation Information Security Reports (TSIRs) to more accurately describe the type of information contained in these reports. A DOT Order was implemented detailing the responsibilities of the Office of Intelligence and Security (OIS) and the Operating Administrations in producing and distributing TSIRs as well as measuring the effectiveness of the distribution system. Standard operating procedures were developed by OIS to ensure that the product and method of distribution were consistent each time a TSIR was disseminated. Operating Administrations were required to develop dissemination plans and provide contact information for all end users to whom the TSIRs were sent.

OIS measured the dissemination time of every TSIR distributed during the past fiscal year, resulting in a final baseline of 41.5%. Throughout the year, individual percentages were shared with the Operating Administrations so that they could identify and correct potential problems and modify their dissemination systems.

The effective and timely sharing of transportation security-related information allows DOT to more effectively work with its industry partners to reduce transportation system vulnerabilities and mitigate acts of intentional harm.

FY 2000 Performance Plan Evaluation: Based on program performance in FY 1999, we will strive to achieve the goal set in the FY 2000 performance plan.

Strategies and Initiatives to Achieve 2001 Goal: DOT will improve data receipt from intelligence and law enforcement authorities and industry, evaluate and improve information channels, and provide education and awareness programs to increase information sharing, as follows:

- OST and RSPA will complete a requirements analysis to upgrade and/or reconfigure DOT's communications system to improve threat dissemination, information sharing, national security, counterterrorism, and emergency response needs of the Department, state and

local governments, and the transportation industry (\$214 K).

- OST will provide a full-time liaison with the CIA and other elements of the Intelligence Community (\$135 K).
- OST will provide a liaison officer at the FBI Domestic Terrorism/Counterterrorism Planning Section to coordinate security and intelligence issues between FBI, DOT Operating Administrations, and state and local law enforcement.
- OST will continue development of the Infrastructure Assurance Training and Awareness Program in cooperation with the transportation industry (\$100 K).

In future years, DOT will pursue additional activities to improve the rate at which threat information is disseminated as well improve the amount of relevant information the Department receives from the Intelligence Community and transportation industry. DOT will explore listserve and webcasting capabilities and effectiveness to distribute information.

DOT will protect DOT assets and transportation infrastructure for which is has authority and responsibility. In FY 2001, DOT will do the following:

- DOT's Chief Information Officer will establish an Information Technology (IT) security team to provide leadership and assistance throughout DOT to protect IT systems. (\$900 K)
- FAA will continue conducting security vulnerability and risk assessments of the air traffic control facilities, and implementing a National Airspace System Risk Management Program to determine the most cost effective way to protect its employees and critical infrastructure. FAA will also further develop information security plans to prevent penetration of information systems and corruption of air traffic and operational data. Finally, research will be conducted on preventing and detecting information system intrusions and existing systems will be modified to improve information systems security.
- OST and RSPA will expand research on high priority critical infrastructure vulnerability areas, and further develop contingency plans (\$6.8 M).

DOT will partner with the transportation industry, and state and local governments to identify and counteract vulnerabilities to the transportation infrastructure. In FY 2001, DOT will:

- Assess the vulnerabilities of information systems critical to transportation, and develop an information sharing and analysis capability with the industry. (\$900K)

Other Federal Programs with Common Outcomes: It is the goal and intent of the Presidential Decision Directive (PDD) 63 to reduce the vulnerability of the critical infrastructure through a public-private partnership. The federal government is expected to achieve and maintain, by 2003, the ability to protect our nation's critical infrastructure from intentional acts that would significantly diminish the abilities of the government to perform essential national security missions. For each of the major sectors of our economy, including transportation, Sector Coordinator and Sector Liaison Officials are required to: a) work in partnership to assess the vulnerabilities of the sector to cyber and physical attacks; b) recommend a plan to eliminate significant vulnerabilities; and, c) relevant to this particular performance measure, develop a plan for alerting, containing and rebuffing an attack to the infrastructure. The intelligence community is directed to collect and analyze threats to the national infrastructure, including cyber and information warfare threats, and all Departments and agencies are expected to have systems and protocols in place for rapidly disseminating this information to headquarters and field personnel, and to owners and operators.

DOT maintains close liaison with numerous law enforcement agencies, such as the Federal Bureau of Investigation, Central Intelligence Agency, U.S. Secret Service, State Department and local police departments to acquire current threat information against transportation systems and facilities. This affords DOT access to information on current terrorist activities to transportation operational elements worldwide.

SEALIFT CAPACITY: Since the end of the Cold War, the Department of Defense (DOD) has downsized significantly. To maximize DOD's logistics capability and minimize its cost, future defense transportation requirements will be met by increasing reliance on the U.S. commercial sector. However, increasing globalization and consolidation of transportation providers have left fewer U.S.-flag commercial carriers and an increased risk of disruption of defense transportation. The ability of the United States to respond unilaterally to future military emergencies will require adequate U.S.-flag sealift resources. The Maritime Security Program/Voluntary Intermodal Sealift Agreement program (MSP/VISA) assures DOD access to critical sustainment sealift capability for national security contingency requirements. The program provides for a seamless, time-phased transition from peacetime to wartime operations while balancing defense and economic elements of civilian transportation for national security.

Performance Goals & Results

Performance Measure: Ship capacity (in twenty-foot container equivalent units, or TEUs) available to meet DOD's requirements for intermodal sealift capacity.

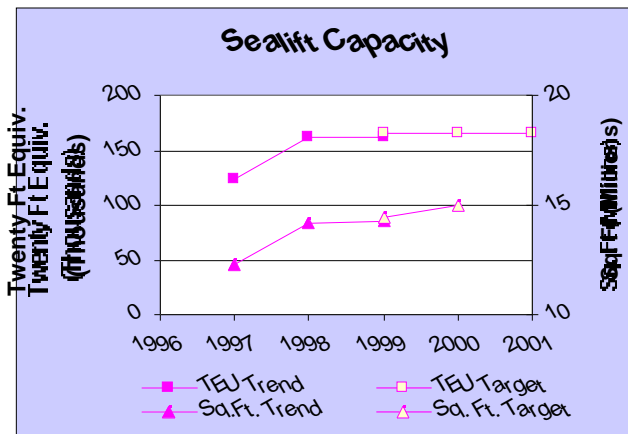
Goals: **1999** **2000** **2001** 165,000
Actual: 162,151

Performance Measure: Ship capacity (in million square feet) available to meet DOD's requirements for intermodal sealift capacity.

Goals: **1999** **2000** **2001**
 14.5 15.0 --- #
Actual: 14.3

Measure discontinued after 2000.

External Factors: Business trends and increased globalization and consolidation of shipping companies could impact the availability of U.S. sealift capacity.



1999 Results: The 1999 targets of 165,000 TEUs and 14.5 million square feet of capacity were not met because three vessels were chartered to DOD and taken out of commercial service, and three containerships that were originally built with construction-differential subsidy (CDS) reached 25 years of age and were no longer enrolled in the Voluntary Intermodal Sealift Agreement program (VISA). The result was a

temporary net loss of capacity (see FY 2000 assessment below).

By the end of FY 1999, 162,151 twenty-foot equivalent units (TEUs), or 14.3 million square feet, of militarily useful sealift capacity were enrolled under the VISA program. The sealift capacity enrolled under VISA increased by 893 TEUs during FY 1999 from the FY 1998 end-of-year level. Of the total militarily useful VISA capacity, 116,171 TEUs of capacity were from the Maritime Security Program (MSP), and the remaining 45,980 TEUs were non-MSP capacity enrolled in VISA.

The primary methods by which shortfalls in VISA capacity are addressed include conducting annual VISA open seasons and assuring that statutory requirements, including those relative to the transfer of MSP operating agreements between shipping companies, are adhered to. In addition, to offset ship capacity shortfalls in the VISA program, DOD can request Presidential authority for the Maritime Administration to exercise its emergency authority to requisition non-VISA U.S.-flag ships to satisfy the contingency requirements. Sufficient non-VISA U.S.-flag capacity was available in 1999 to make up the shortfall, if it had been required.

FY 2000 Performance Plan Evaluation: The FY 1999 shortfall in VISA capacity was nearly 3,000 TEUs, or 250,000 square feet. However, by December 10, 1999, the VISA commitment had increased to 172,353 TEUs, or 15.1 million square feet. The increase from the end of FY 1999 was a result of the FY 2000 VISA open season completed in October 1999 (about 25 percent of the increase), and of the transfer of MSP operating agreements between shipping companies (about 75 percent of the increase). While this means that DOD's FY 2000 requirements have been exceeded, the total capacity commitments could continue to fluctuate during FY 2000.

The majority of ships in the MSP—the primary source of sealift capacity enrolled in VISA—are containerships, which normally are measured in TEUs. DOD generally measures sealift ships, most of which are roll-on/roll-off ships, in square feet. During FY 1999, MARAD

initiated discussions with DOD to improve the metrics associated with VISA carrier capacity, but until common measures are agreed upon, the use of both measures is still appropriate. It is expected that agreement will be reached on common measures during FY 2000. Therefore, the square feet performance measure for ship capacity will be discontinued in 2001.

Strategies and Initiatives to Achieve 2001 Goal: DOT will continue to maintain sealift agreements with DOD and industry in order to provide DOD with the level of "assured access" to the total global intermodal transportation network that DOD requires. This access includes carriers' ships, logistics management services, infrastructure, terminals and equipment, communications, and cargo-tracking networks, as well as seafaring and shoreside workforces.

- MARAD will continue implementing the Maritime Security Program (MSP), providing funding to make payments of \$2.1 million per ship per year (\$98.7 million) to U.S. carriers for 47 ships.
- MARAD, in partnership with DOD, will reevaluate the commercial sealift target and strategies, based on the results of the DOD Mobility Requirements Study 2005 and the MARAD FY 2000 program evaluation of MSP/VISA.
- MARAD and DOD will develop a common measure of capacity for all ships enrolled in the MSP/VISA program. Square feet will no longer be used; TEUs will continue in use as the measure.

Other Federal Programs with Common Outcomes:

The national sealift objective of the United States is to ensure that sufficient military and civil maritime resources will be available to meet both defense deployment, and essential economic requirements, in support of our national security strategy. This is primarily a DOD goal, with MSP/VISA a supporting program for which DOD and MARAD share joint responsibility. Joint planning between DOD, MARAD, and the maritime industry provides a mechanism for U.S.-flag carriers to pool resources to meet DOD and commercial transportation requirements simultaneously and without great delay during a defense emergency. Without the MSP/VISA program, and its advance arrangements in joint planning (outside of the competitive arena) between agents of the U.S. government and industry, it is unlikely that the commercial fleet would be able to provide the necessary capacity to support a significant portion of sustainment requirements in a timely fashion during an emergency.

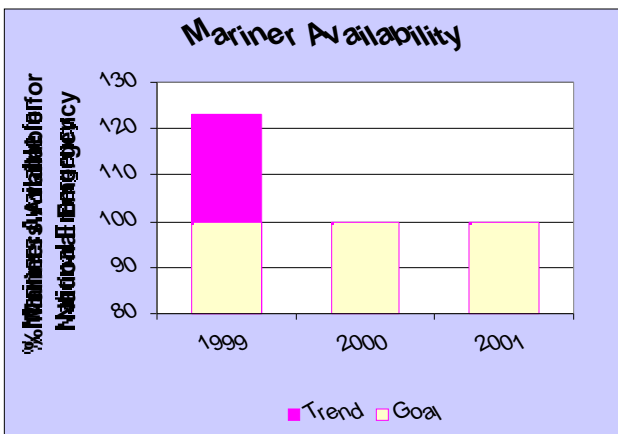
MARINER AVAILABILITY: U.S. national defense depends on strategic mobility to project power in remote places of the world. This, in turn, depends on maritime shipping, and these ships need competent crews. In particular, to become operational, all vessels in the Ready Reserve Force (RRF) require licensed and unlicensed U.S. seafarers. Merchant mariners employed on commercial vessels in the U.S. domestic and international trades provide the core job skills needed to crew the RRF. Without this pool of merchant mariners, it is unlikely that sufficient seafarers would be available to crew the RRF, as well as maintain ongoing commercial activity, in an emergency. In a full mobilization requiring activation of all the RRF, inactive mariners would be needed, particularly those who have recently sailed and still hold valid licenses/documents.

Performance Goal & Result

Performance Measure: Of the mariners needed to crew combined sealift and commercial fleets during national emergencies, the percent of the total that are available.

Goals:	1999	2000	2001
	100%	100%	100%
Actual:	123%		

External Factors: Performance has not been affected by the number of U.S. mariners who choose to maintain the required seafarer's certificates and experience needed to crew both the commercial and government-controlled sealift fleets during contingencies. Yet, the tightening of international standards for maritime training and certification affects the number of qualified merchant mariners. Shoreside employment commitments, as well as a mismatch of available individuals compared to the skills required for unfilled positions could then lead to crewing shortfalls.



and unlicensed mariners available to meet commercial and DOD organic crewing requirements for a long term (over 6 months) mobilization, based on maximum planning requirements for commercial and government-controlled sealift. The aggregate supply of licensed and unlicensed mariners (actively sailing, plus inactive but with sailing experience within the past five years) exceeded the goal by 23 percent. Not all inactive

mariners will be available during an activation. Many mariners have shoreside employment commitments.

In FY 1999, 67 sea trials for RRF ships were completed. Of these, 15 were no-notice activations for readiness testing, and six were activated for Hurricane Mitch relief efforts in Central America. No crewing shortages occurred for these short-term activations.

The education and training of licensed officers at the U.S. Merchant Marine Academy (USMMA) and the six State marine academies contributes to mariner availability by providing new licensed officers for shipboard jobs and other maritime industry positions. The USMMA is a Federal institution funded and administered by MARAD, whereas the State academies are primarily State supported. In 1999, 174 officers graduated from the USMMA, and 366 officers graduated from the six State maritime academies (California, Great Lakes, Maine, Massachusetts, New York, and Texas).

In addition, in 1999 MARAD, the U.S. Coast Guard and the U.S. maritime industry worked to establish requirements for the Global Maritime Distress and Safety System (GMDSS) training regime to enable mariners to earn their necessary GMDSS endorsements. Additional new mandatory training and certification requirements are being implemented as a result of the 1995 Standards of Training, Certification, and Watchkeeping (STCW-95). As of February 1999, STCW-95 core training as provided by USMMA and the six State maritime academies has received conditional approval. Final approval will be no later than January 2002 after an on-site audit at each maritime academy.

FY 2000 Performance Plan Evaluation: MARAD will undertake further study to determine whether shortages of specific skills exist. If so, DOT, DOD and the commercial sector will work together to evaluate options to remedy crewing shortages.

Strategies and Initiatives to Achieve 2001 Goal: DOT supports mariner education to sustain the available pool of crew members by training new licensed officers and through continuing education programs to maintain and increase the competence of current mariners. DOT also

works with mariner labor unions to match supply with national emergency needs.

- During FY 2001, MARAD will support merchant marine officer training through the U.S. Merchant Marine Academy educational program (\$37.2 million), including \$3 million for continuation of needed capital and operating improvements at the Academy. MARAD will also support merchant marine officer training through the State maritime academies (\$9.5 million, a \$2.5 million increase above FY 2000).
- MARAD will continue its partnership with Coast Guard to evaluate and certify, as appropriate, the seven maritime academies' training programs to assure compliance with the International Maritime Organization (IMO) Standards of Training, Certification and Watchkeeping (STCW) revisions adopted in 1995.
- In FY 2001, MARAD also will:
 - Implement a plan to meet the simultaneous crewing requirements for Government-owned sealift ships and commercially-owned ships used during a national emergency. This effort will include refinement of data on availability of mariners (e.g., skill mix and type of seafarers, willingness to sail, etc.) and partnering with the major maritime unions, as appropriate.
 - Identify additional manpower providers or potential sources to supplement traditional crewing methods in case of mariner shortages resulting from prolonged sealift operations.
 - Identify the needs for mariner training in critical skill areas.

MARAD plans to coordinate all of these efforts with the maritime industry.

Other Federal Programs with Common Outcomes:

DOT and DOD share a common goal to have sufficient sealift capacity available to meet defense mobilization requirements for the movement of people and materiel. DOD determines the sealift capacity requirement. This requirement, in turn, drives the ship crewing needs for a mobilization. DOD relies on civilian mariners to meet its mobilization crewing requirement. MARAD and DOD meet regularly to coordinate planning for both sealift capacity and crewing requirements.

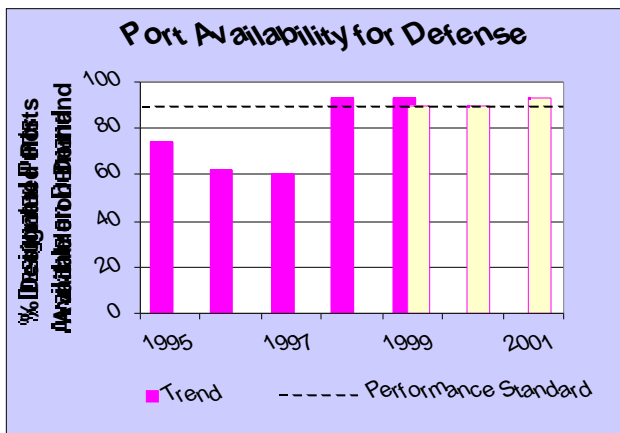
DOD-DESIGNATED PORT FACILITIES: Port and intermodal facilities provide the critical interface between the water and surface modes of transportation, handling both commercial and military cargoes. During military mobilizations, DOD must be able to move equipment and supplies through designated commercial port facilities on a timely basis if cargo is to be delivered to the theater of operations when needed by U.S. troops. DOT is responsible for establishing DOD's prioritized use of ports and related intermodal facilities during DOD mobilizations, when the smooth flow of military cargo through commercial ports is critical.

Performance Goal & Result

Performance Measure: Percentage of DOD-designated primary or alternate port facilities that are available when requested by DOD.

Goals:	1999	2000	2001
	90%	90%	93%
Actual:	93%		

External Factors: Global trade is continuing to increase, placing growing demands on U.S. ports. The increased demand may reduce the ready availability of commercial port facilities for use by the military during national emergencies. The capability of U.S. ports to meet U.S. national security requirements will also be affected by: 1) the adequacy of land and waterside access to the strategic ports; 2) the availability of sufficient longshore labor to load military cargo onto sealift vessels during contingencies; and 3) the suitability of cargo handling technology and equipment.



showed that 13 of the 14 DOD-designated strategic ports for military use (93 percent) were considered able to meet DOD readiness requirements on 48-hour notice. This exceeded the performance target of 90%. The improvement in port readiness from 60% in 1997 to 93% in 1998 and 1999 reflects steps taken by MARAD and the Military Traffic Management Command (MTMC) to improve the measurement of port readiness and to develop a greater awareness by port officials of the actions necessary to increase port readiness.

In order to ensure that DOD-designated strategic port facilities are available to the military on 48-hour notice throughout the year, MARAD and MTMC have developed a reporting system to provide ongoing information on port readiness. MARAD and MTMC assess port readiness semi-annually based on such factors as the suitability of available facilities (e.g., staging areas, berths, and shoreside equipment); the adequacy of the local labor pool; and the accessibility of the port to water, highway, and rail facilities.

During the intervening months between assessments, Federal Port Controllers at the 14 ports submit monthly reports to MARAD and DOD. Most of the potential readiness problems identified in the monthly reports were due to congestion or the construction/reconstruction of facilities. By the end of FY 1999, only one port reported a problem considered serious enough to delay its readiness beyond 48 hours after notice of a military mobilization. Had DOD needed use of these facilities, MARAD could have issued a National Shipping Authority Priority Order (under 46 CFR 340). This would temporarily set aside any existing contracts and shield the port authority and/or terminal operator from litigation as a result of disruption caused by the deployment. Alternatively, DOD could have attempted to use alternate facilities within the strategic port, if available, or facilities at another, non-strategic, port in the area.

In 1999, MARAD reviewed port planning orders at all 14 strategic ports and issued new orders where it was appropriate. Port planning orders are planning documents that identify specific facilities (staging areas and berths) available at each port for DOD use during a national emergency deployment.

In 1999, the Coast Guard, MARAD, and the port readiness committees at the strategic ports (representatives of the federal agencies and organizations comprising the National Port Readiness Network) conducted port readiness exercises in Corpus Christi, TX, Savannah, GA, Jacksonville, FL, Tacoma, WA, and New York, NY. All strategic ports were engaged in personnel readiness training in FY 1999 through a combination of table-top, mobilization, command post, or Sealift Emergency Deployment Readiness (SEDRE) exercises. These events improved the tactical maneuvers

necessary for the military to utilize the strategic ports more efficiently during deployment.

FY 2000 Performance Plan Evaluation: In 1999, MARAD will partner with DOD commands and the strategic ports to begin development of port services basic ordering agreements (BOA). BOAs are prenegotiated agreements between the military and port authorities that set out the services that the military may need during a deployment that are not covered by the existing terminal port authority tariff. BOAs will only be developed where the strategic port authorities consider it necessary to clarify their responsibilities during national emergency situations. The first BOA will be completed in FY 2000.

Based on program performance in FY 1999, we expect to achieve the goal set in the FY 2000 performance plan.

Strategies and Initiatives to Achieve 2001 Goal: MARAD will continue to develop BOA agreements, as needed, between DOD and the 14 DOD-designated strategic commercial ports, and will assist MTMC in determining if additional port facilities should be added to those facilities already designated as strategic ports. MARAD will also work cooperatively with ports, carriers, and DOD to improve the interface between water and surface modes of transportation to facilitate the movement of essential cargoes during national emergencies.

MARAD will continue to administer the port readiness program through the following activities:

- MARAD, working with MTMC, will examine the readiness of DOD-designated port facilities by testing deployment plans through port readiness exercises, monitoring the availability of the facilities on a monthly basis, and conducting semi-annual port readiness visits of terminal facilities.
- MARAD will assist in maintaining the readiness of port personnel and federal port controllers by issuing port planning orders, providing for Federal Port Controller contracts, updating port planning orders and port security manuals, and conducting port readiness workshops.
- MARAD will increase port facility capability by assisting in the transfer of surplus property and providing technical assistance to the Center for the Deployment of Transportation Technologies to develop cargo handling technology improvements.

Other Federal Programs with Common Outcomes: Under a 1984 Memorandum of Understanding (MOU) on Port Readiness, nine Federal agencies and

organizations -- the Maritime Administration, the U.S. Army Corps of Engineers, the U.S. Coast Guard, the Military Traffic Management Command, the Military Sealift Command, the commands of the Maritime Defense Zone, the U.S. Army Forces Command, the U.S. Transportation Command, and the U.S. Atlantic Command -- agreed to shared responsibilities for support of the efficient movement of military forces and supplies through U.S. ports. The MOU establishes a National Port Readiness Steering Group, containing representatives of all nine agencies, which provides policy direction and sets broad priorities for accomplishing the objectives set forth in the MOU.

In support of the common goal of the members of this National Port Readiness Network, the Military Traffic Management Command (MTMC) designates the ports that are of strategic importance and develops and submits to MARAD the DOD requirements for the use of port facilities and services needed for a military deployment for military cargoes under a mobilization. MARAD issues planning orders to the affected ports for information purposes and to provide guidance for confirming arrangements necessary to meet DOD's needs. The achievement of the performance goal is thus a collaborative effort primarily by MARAD and MTMC.

READY RESERVE FORCE (RRF) ACTIVATION: The Department of Defense (DOD) relies on the RRF as a key source of surge strategic sealift capacity to support the rapid deployment of U.S. military forces during the early stages of a military crisis. The DOD funds DOT's maintenance and operation of the RRF. The fleet is sized and configured to meet DOD requirements for specific ship types and for specially outfitted support ships to carry heavy and oversized military cargoes that cannot fit into the containerships that are predominant in today's commercial general cargo fleet. A consistently high level of operational reliability, which requires extensive coordination among participants through no-notice activations and sea trials, is essential for the RRF to effectively support DOD.

Performance Goals & Results

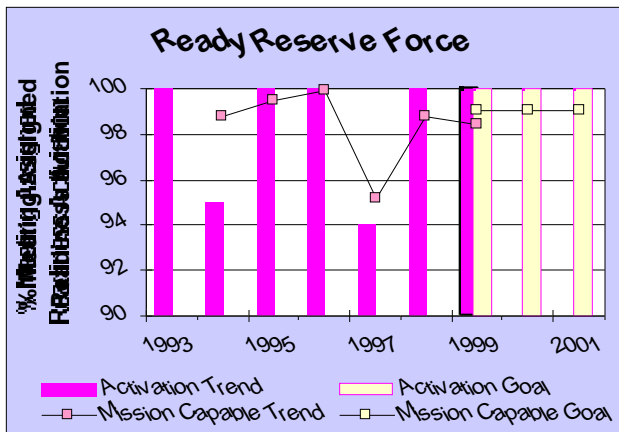
Performance Measure: Percent of RRF no-notice activations that meet assigned readiness timelines.

Goals:	1999	2000	2001
	100%	100%	100%
Actual:	100%		

Performance Measure: Percent of days that RRF ships are mission-capable while under DOD control.

Goals:	1999	2000	2001
	99%	99%	99%
Actual:	98.4%		

External Factors: Changes in viability of the U.S. ship repair industry and the availability of U.S. mariners to crew the ships may affect the activation and operation of RRF ships.



1999 Results: During FY 1999, all 15 RRF ships ordered activated by DOD without advance notice (i.e., "no-notice") were delivered within DOD-assigned readiness timelines. The reliability of the RRF ships once activated under Military Sealift Command (MSC) control in FY 1999 was 98.4 percent, covering 1,960 ship-operating days. In one case, the tanker PETERSBURG was not mission capable for 30 days due to unscheduled repair time needed to fix a low-pressure turbine coupling. (The PETERSBURG is one of two Offshore Petroleum Discharge System [OPDS] tankers assigned to the Afloat Preposition Force [APF] and is kept in operational status in Guam.) The PETERSBURG's problem represented a temporary, 50

percent reduction in cargo fuel available to DOD from RRF underway tankers. The other OPDS tanker, the POTOMAC, stationed in Diego Garcia, was available to fill any immediate requirements. In addition, the CHESAPEAKE, home ported in San Francisco, was placed on alert as a potential replacement if the DOD area commander had considered it necessary. The CHESAPEAKE was not sent to replace the PETERSBURG because a 30-day fix was available and a tanker swap would have been very costly.

As seen above, the reliability of the RRF ships once activated, as measured in the percent of days that RRF ships are mission-capable while under DOD control, is primarily determined by the number of days it takes to repair a ship that becomes inoperative. For example, the low percent of mission capability in 1997 (95.2) was the result of one ship being out of service for 156 days while undergoing repairs.

In FY 1999, sixty-seven sea trials for RRF vessels were completed. These sea trials were the result of scheduled maintenance activations, as well as no-notice activations and exercise activations, using funding available from DOD's National Defense Sealift Fund (NDSF). These vessel checks continued a MARAD in-house program of maintenance sea trials, under which selected ships are activated to test both overall ship material condition, as well as the ship managers' maintenance and management procedures. During maintenance sea-trials, RRF ships undergo thorough testing of all systems and equipment. These trials also serve as the means to renew regulatory certificates and identify future repair and vessel upgrade needs. In FY 1999, MARAD also drydocked 14 RRF ships, which underwent extensive hull preservation maintenance.

In FY 1999, MARAD and MSC began to plan for a command-post crewing exercise to take place in FY 2000 to test the availability of mariners to man RRF and MSC sealift ships during a simultaneous activation. By the end of FY 1999, an updated matrix of RRF crewing requirements had been developed. (See the "Mariner Availability" performance goal for discussion of RRF crewing and mariner availability.)

FY 2000 Performance Plan Evaluation: No adjustment to the FY 2000 Performance Plan is required as a result of 1999 performance.

Strategies and Initiatives to Achieve 2001 Goal:

MARAD will ensure rapid activation of RRF vessels by maintaining accurate fleet-wide data on RRF vessels and characteristics; requiring the use of commercial contracting practices by RRF ship managers; upgrading the status of priority RRF ships to include permanent onboard Reduced Operating Status (ROS) crews; and conducting full-power sea trials.

- In FY 2001, \$262 million is being requested by DOD (reimbursable to MARAD) to support the maintenance of 90 RRF ships. These ships will support the readiness goals prescribed by DOD's Transportation Command. The ships include 86 that are kept in a high state of readiness to enable them to be activated in 4,5,10, 20 or 30 days to meet military sealift requirements; and 4 ships in preposition status under the operational control of MSC.
- In FY 2001, MARAD will conduct 52 maintenance sea trials and 10 dock trials. The trials enable MARAD to monitor the material condition of the ships and provide ROS crews as well as ship managers with training. DOD also plans several no-notice RRF test activations, which will be funded separately by DOD.

Other Federal Programs with Common Outcomes:

The Ready Reserve Force was established as a component of the retention National Defense Reserve Fleet (NDRF) in 1976 by a Memorandum of Agreement between the Department of Defense and MARAD. The overall joint goal of DOD and MARAD for the RRF is to keep these ships in a high state of readiness to enable them to meet surge military sealift requirements in the event of war or military deployment (the current total DOD surge sealift requirement calls for about 10 million square feet of capacity; the RRF contributes approximately 5.79 million square feet of this capacity). The performance measures for meeting readiness timelines and mission-capability are MARAD goals for meeting the overall joint goal of DOD and MARAD.

To meet the joint goal, DOD funds the RRF and determines specific ship types and configuration requirements, as well as site selection, for the RRF ships. MARAD develops supporting maintenance activity and spending plans, and provides complete program management services to maintain and activate the fleet.

MILITARY READINESS (COAST GUARD): The U.S. Coast Guard – as one of the five armed services – provides an essential and unique element of our national security. Today, its defense functions are targeted to the service’s unique capabilities in maritime interception (related to Coast Guard’s law enforcement work), environmental defense (such as oil spill operations in the Persian Gulf in 1991), and deployed port security and defense.

Performance Goals and Results

Performance Measure: Readiness rating (weighted index) for all high endurance cutters, patrol boats, and port security units.

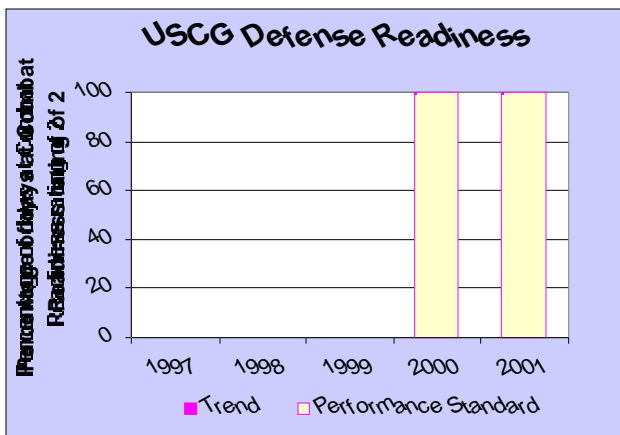
Goals:	1999	2000	2001
	72	-- #	-- #
Actual:	53		

Performance Measure: Percentage of days that the designated number of critical defense assets (high and medium endurance cutters, patrol boats, and port security units needed to support Defense Department operational plans) maintain a Combat Readiness rating of 2 or better.

Goals:	1999	2000	2001
	--	100%	100%
Actual:	4%		

Performance measure changed after 1999.

External Factors: The high level and tempo of national security operations can result in the slippage of long-term maintenance, and logistics support in order to meet immediate operational needs.



1999 Results: The Coast Guard was not able to provide the appropriate level of readiness to achieve an indexed readiness rating of 72. The actual rating was 53.

Although there was no 1999 Performance Plan goal for the percentage of days that the designated number of critical defense assets maintain a Combat Readiness rating of 2 or better, the available data shows the Coast Guard did not achieve the appropriate level of readiness for "combat ready" units to meet 100 percent of the

Department of Defense Commander-in-Chief contingency plan requirement. However, as the indexed readiness rating shows, a significant portion of the critical defense assets were available to meet DOD requirements most of the time. DOD contingency requirements are for "worse case" scenario plans. Although the Coast Guard was not able to maintain a fully ready status to meet these stringent requirements, it did have a number of units that successfully contributed to several military operations.

The Coast Guard was able to supply a full complement of combat ready patrol boats 100 percent of the time in 1999, but only able to supply the appropriate number of high endurance cutters 4 percent of the time. The Port Security Units are new; they are on schedule to be fully operational in 2001.

The major reasons cutters were not considered ready were personnel and training shortfalls, followed closely by equipment breakdowns. With the current tight labor market, the Coast Guard has had trouble keeping its personnel positions filled at authorized levels. In addition, when experienced personnel leave the Coast Guard, new members do not have the same experience or training levels. These factors result in a decreased readiness status. Equipment breakdowns on high endurance cutters are possibly the result of a number of factors including decreased experience levels among maintenance personnel, aging equipment, and the need to meet increasing mission requirements in drug, migrant, and illegal fishing interdiction, as well as military operations.

FY 2000 Performance Plan Evaluation: We expect to improve the level of readiness in 2000. This level is what the Coast Guard ultimately manages toward in order to meet established national defense requirements. The Coast Guard is improving readiness through modernizing assets, restoring decreased maintenance resources, improving logistics, and restoring reduced training levels. Deepwater fleet modernization is critical to meeting DOD operational plan requirements since many missions involve operations overseas for lengthy periods of time.

The performance measure for FY 1999 has been changed for FY 2000. The new measure is a pass/fail measure that provides a clearer picture of Coast Guard readiness to meet its specific defense requirements as defined by

the DOD contingency plans. The “weighted index” readiness rating used for FY 1999 was a broad, aggregated measure of the readiness of all units. The improved measure is more tightly defined to gauge only the readiness of designated critical defense assets, and it establishes a clear threshold to be met year-round.

The performance standard for FY 2001 may be revised based on 2000 results.

Strategies and Initiatives to Achieve 2001 Goal: To achieve the stated level of readiness, the Coast Guard will improve its logistics and maintenance systems, increase vessel and aircraft capabilities, and update and rehabilitate aging assets.

- The FY 2001 budget includes \$73.4 million to fully support a Selected Reserve of 7,300, which will contribute to maintaining the readiness status of Port Security Units at a Combat Readiness rating of 2 or better.
- The Coast Guard will establish a response capability to weapons of mass destruction (WMD) in the maritime environment as part of the mandate of this expanding national security requirement. This initiative provides chemical, biological, radiological (CBR) protective equipment and personal and unit decontamination supplies for cutters, boats, Strike Teams, and Port Security Units. (\$2.4 million)
- The Coast Guard will participate in DOD readiness exercises, conduct refresher training, and regularly evaluate its defense resources for readiness status.
- During FY 2001, the Department will continue the process of analyzing the future systems needed to replace current Coast Guard deepwater assets as they reach the end of their useful lives. (\$42.3 million)
- The Coast Guard will enhance its readiness to meet DOD obligations in support of National Security by obtaining needed equipment including deployable patrol boat support, and replacing obsolete communications and navigation equipment.

Management Challenge – Coast Guard Deepwater Acquisition Management The Coast Guard has embarked on a long-term project to systematically replace or modernize the assets it uses in its Deepwater missions – those that occur more than 50 miles offshore. These missions include drug interdiction, illegal immigrant interdiction, and fisheries law enforcement. The assets the Coast Guard needs to replace include cutters, aircraft, and sensors – a system of systems that gives the Coast

Guard its ability to protect our borders and ensure the security and sovereignty of our nation.

From a systems approach, the deepwater acquisition represents the largest capital improvement project ever undertaken by the Coast Guard. The management challenge facing the Coast Guard is to effectively plan and manage this acquisition. The Coast Guard has taken steps to minimize project risk and achieve the efficiencies of a system approach.

To begin, the Coast Guard has employed a team of specialized technical experts to assist in overseeing this project and evaluating the proposals. Industry teams will submit their final proposals by July, 2001. At this time the functional designs will be approximately 80 percent complete and will provide the Coast Guard with a level of detail necessary to help mitigate acquisition risk and answer questions raised by the DOT IG concerning this project. During the design phase, the Coast Guard is engaging in collaborative communications with all three contractors, to ensure that the final design submissions answer all major issues.

The three contracts are expected to produce reliable cost estimates for the systems that they propose. However, final costs will not be known until the Deepwater project moves from Phase I (Design) to Phase II (Proposal review) and the Coast Guard awards a full production contract in January 2002.

Other Federal Programs with Common Outcomes:

The Department of Defense coordinates the assigned roles of each service in national defense, and develops readiness-rating systems. The Coast Guard may operate under the Secretary of the Navy in time of war. The Coast Guard routinely participates in military exercises that enhance the joint readiness of the armed forces. In 1999, Coast Guard cutters participated in FOAL EAGLE, an exercise to test the joint readiness of forces protecting South Korea. The Coast Guard also works with the Department of Defense to set readiness criteria, and develop systems for tracking readiness. Several agreements outline the services that the Coast Guard will provide toward national defense, including maritime interception, environmental defense, and peacetime engagement. Jointly developed operational plans establish the levels of readiness that the Coast Guard needs to provide for different contingencies.

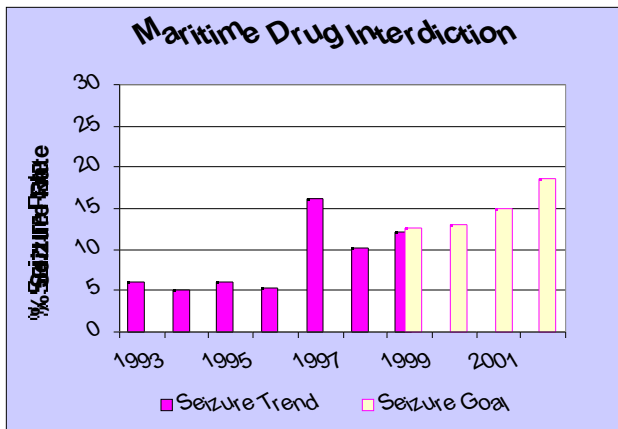
DRUG INTERDICTION: Illegal drugs threaten our children, our communities, and the social fabric of this country. There are approximately 52,000 drug-related deaths in America each year, from drug abuse and drug-related crimes, accidents, and illnesses. Illegal drug smuggling also destabilizes the nations it touches along the way. In 1998, an estimated 373 metric tons of cocaine passed through the transit zone via non-commercial means (such as fishing vessels and smuggling “go-fasts”, as opposed to being smuggled in containers via commercial shipping) on its way to the U.S.

Performance Goal and Result

Performance Measure: Seizure rate for cocaine that is shipped through the transit zone.

Goals:	1999	2000	2001
	12.5%	13.0%	15.0%
Actual:	12.2%		

External Factors: Drug interdiction operates in a challenging and ever changing environment. The international drug syndicates operating throughout our hemisphere are resourceful, adaptable, and extremely powerful. At the same time, socioeconomic conditions – here and abroad -- influence the supply and demand for illegal drugs.



1999 Results: Final seizure data and cocaine shipment data for 1999 show a seizure rate of 12.2% compared to the target of 12.5%. This is an increase above the 1998 seizure rate of 10.1%.

Seizure data alone show a record year for cocaine seizures – 111,689 pounds of cocaine in all. (The previous best was 103,000 pounds in 1997.) However, the maritime cocaine flow rate (estimated by the Office of National Drug Control Policy) increased to 414 metric tons - the highest level since data became available in 1995. This increased flow partially offset the dramatic increase in seizures, leaving the rate just short of this year's target. 1999 marked the third year of an aggressive counter-narcotics campaign, Operation Steel Web, which has produced what appear to be sustained increases in the seizure rate from pre-1997 levels.

A significant factor in the successful movement of cocaine has been smugglers' use of high-speed "go-fast" vessels. In 1999, the Coast Guard began a limited deployment of a new program to stop smuggling from high-speed “go-fast” vessels. In Operation New Frontier, Coast Guard cutters sailed with specially equipped “use of force” helicopters and high-speed interdiction boats. These units carried high-tech equipment designed to safely stop fleeing go-fasts. This is a new and untested program and predicting its contribution to the seizure rate is difficult, but these new tactics quickly stopped four go-fasts carrying more than 6,900 pounds of drugs in 1999. Use of this concept in 2000 will provide more information to assess its effectiveness in reducing the cocaine flow – either through seizures or deterrence.

Another growing threat in smuggling has been the shipment of cocaine to the U.S. through the eastern Pacific. Our 1999 efforts in the eastern Pacific netted 2 of the 3 largest Coast Guard cocaine seizures ever: the fishing vessels XOLOESCUINTLE and MAZATLAN IV, carrying 21,036 and 15,515 pounds of cocaine respectively.

FY 2000 Performance Plan Evaluation: The seizure rate target for FY 2000 is raised to 13% as we aim to meet our portion of the Office of National Drug Control Policy's 2002-supply reduction goal (18.7%). The Coast Guard is locked in a battle to meet this 2000 goal, upgrading radar systems and night vision equipment, improving intelligence gathering and expanding “use of force” helicopter and “over-the-horizon” boat operations. However, we face agile and well-funded smuggling organizations that operate over huge areas of ocean, and quickly change tactics to find an advantage. And while results show us just short of our 1999 drug seizure goal, the tempo of operations for the past 3 years was extraordinary and was purchased at the expense of deferred asset maintenance and curtailed support activities. Operations in 2000 are returning to sustainable levels. However, meeting the 2000 goal will be challenging.

Strategies and Initiatives to Achieve 2001 Goal: Reducing the supply of drugs entering the U.S. is a vital element of the National Drug Control Strategy that

provides a better chance for demand reduction efforts to take hold. The Coast Guard will develop sequential, regional pulse operations to deny maritime smuggling routes, targeting high threat areas.

- The Coast Guard will continue to operate along maritime smuggling routes to detect and deter drug smugglers – particularly focusing on stopping high-speed “go-fast” smuggling vessels. It will also train others in source and transit zone countries to enhance their ability to prevent smuggling. (\$565 million total for drug interdiction operations)
- The next phase of the Airborne Use of Force project will improve the Coast Guard’s ability to stop smuggling go-fasts – a significant mover of cocaine through the transit zone. Critical to increasing seizure rate. (OE \$17.2 million)
- Increased deployable Law Enforcement Detachment (LEDET) capability will provide 4 additional detachments for operations and training missions. LEDETS are very successful in counterdrug operations: responsible for 10 of the 16 largest seizures. (OE \$1.5 million)
- Our counterdrug intelligence and support will provide additional intelligence collectors, teamed with increased analytical capability that will result in a higher amount and quality of information to support more effective counterdrug operations. (OE \$1 million)
- Coast Guard liaison officers and mobile training teams will assist transit zone countries in improving counterdrug operations. (OE \$603,000)
- Our Deepwater capability replacement project develops a system of surface, air, command and control, intelligence, and logistics systems to carry out drug interdiction in the deepwater area of responsibility. Deepwater is essential to maintaining an effective drug interdiction presence in the deep Caribbean and Eastern Pacific where there is limited resupply and refueling opportunities. (AC&I \$42.3 million)
- Coast Guard also is working with the Office of National Drug Control Policy (ONDCP) and the Customs Service to validate the Rockwell Deterrence Study, which may help better measure the deterrent effect of interdiction activity.
- The Federal Aviation Administration will continue to correlate flight plans and transponder codes to enhance communications between air traffic control centers and Customs/Coast Guard, and will continue

identifying airborne smugglers by using radar, aircraft lookouts, and tracking the movement of suspect aircraft.

- The National Highway Traffic Safety Administration will contribute to supply reduction indirectly by continuing its programs to educate America’s youths to reject drugs, contributing to the reduction of drug-related crime and violence.

Other Federal Programs with Common Outcomes:

ONDCP coordinates overall U.S. drug policy, and sets national objectives and goals in the National Drug Control Strategy. The Coast Guard participates in the multi-agency efforts to set these goals. One of the strategies is to achieve the National Drug Control Strategy goal of increasing interdiction of illegal drugs. Coast Guard interdiction activities directly contribute to the national goals of “Shielding America’s air, land and sea frontiers from the drug threat” and “Breaking the foreign and domestic drug sources of supply.” The Commandant of the Coast Guard serves as the U.S. Interdiction Coordinator and regularly coordinates international interdiction efforts with DOD, Customs, and other agencies. Department of State provides international, diplomatic liaison with other countries and supports DOT efforts in bilateral agreements to counter drug smuggling. The field level units that are involved in interdiction also carry out regular contact and coordination.

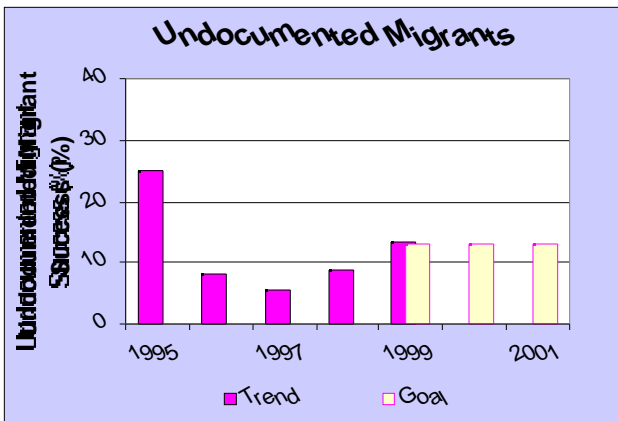
MIGRANT INTERDICTION: Illegal immigration poses a serious threat to America's economic and social well-being, and challenges the integrity of our borders as a sovereign nation. The U.S. has always been a land of immigrants, but as a nation we must be able to control the rate of immigration. Thousands of people try to enter this country illegally every year via maritime routes, sometimes in large waves from unstable countries. And many who try do not survive the harsh environmental conditions at sea.

Performance Goals & Results

Performance Measure: Success rate for undocumented migrants attempting to enter the U.S. over maritime routes.

Goals:	1999	2000	2001
	13%	13%	13%
Actual:	13.3%		

External Factors: Socioeconomic and political conditions in both the U.S. and migrant source countries drive migrant entry attempts. Outcomes are also influenced by the active criminal intent of those who profit from moving illegal migrants. Year-to-year measures of success can take unexpected turns based on changing criminal tactics.



1999 Results: In 1999 13.3% of attempts at illegal immigration by sea were successful, missing the goal of 13% or less. Although the target was missed only narrowly, we are concerned that migrants have been more successful at illegal entry for three years in a row. Smugglers are the driving force behind this three-year increase, most notably with Cuban and Chinese migrants.

In recent years, smugglers have carved out a lucrative business for themselves. Chinese migrants pay smugglers \$35-40,000 each for passage to the U.S.; Cuban migrants pay \$3-8,000. For Chinese migrant smugglers, Guam has emerged as a desirable destination because it is perceived as a successful avenue for reaching the U.S. Guam is a U.S. territory, and migrants that are caught illegally landing there are transferred to the mainland U.S. to await an immigration hearing; some disappear into society before the hearing. In response to this trend,

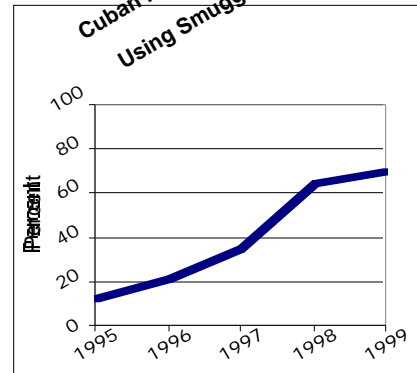
the Coast Guard conducted a concentrated operation near Guam in 1999 that netted 17 smuggling vessels during a 3-month period. We continued to guard against illegal migrants in this area throughout the year.

We believe we are interdicting only about 40% of Cuban migrants. Cuban migrant smuggling has continued in part because provisions of the 1995 Cuban Adjustment Act allow for

Cuban migrants to remain in the U.S. if they reach shore.

Cuban migrant smugglers use regular speed-boats that easily blend in with normal boating traffic. To hide

their involvement and thwart possible prosecution, smugglers leave migrants on small rafts just off the U.S. coast so that it appears the migrants left Cuba on the raft without smugglers' help.



FY 2000 Performance Plan Evaluation: We are continuing to attack the problem in 2000 through increased intelligence, more interagency coordination, and better sensors. We are also increasing coordination efforts with the U.S. Border Patrol anti-smuggling unit and the U.S. Attorney's in Miami. The Coast Guard is working with the Department of State on potential interdiction bilateral agreements. Still, it will be difficult to reverse the success of illegal migrants in 2000. The persistence of smuggling suggests that we increase patrols between Cuba and Florida, and in the Pacific. The Coast Guard uses its resources to meet the real-world security demands of our borders, including drugs and illegal fishing. In 2000, the Coast Guard will keep its total operations at sustainable levels in order to restore maintenance and support functions needed to sustain long-term performance. However, meeting the goal of holding undocumented migrants to 13 percent will be difficult.

Strategies and Initiatives to Achieve 2001 Goal: The Coast Guard will operate along maritime routes to deter attempts by undocumented migrants, and to detect and

stop those who try to enter the U.S. illegally. We will also establish agreements with source countries to assist in reducing migrant flow. For example, aircraft overflight authority granted by the Dominican Republic in 1996, and the resultant deterrent effect, contributed significantly to the decrease in illegal Dominican migrants. We will use intelligence to target our presence in the maritime environment to provide both deterrence and an effective enforcement capability.

- Using patrol boats, cutters, fast boats, intelligence collection and deployable logistics the Coast Guard will continue to provide law enforcement presence at sea. (\$736 million total for drug and migrant interdiction operations)
- The Coast Guard will develop a system of surface, air, command and control, intelligence, and logistics systems to carry out migrant interdiction and migrant rescues in the deepwater area of responsibility. This Deepwater system is essential to keeping assets with long endurance capabilities and extensive command and control capabilities on station during times of increased migration attempts and mass migration events such as the Mariel Boatlift. (\$42.3 million)
- The Coast Guard will continue developing agreements with source countries to coordinate interdiction efforts and to work out strategies for preventing potential illegal migrants from making the attempt.
- Coast Guard liaison officers and mobile training teams will assist migrant source zone countries in improving democratic institutions and effective law enforcement against migrant smugglers.

Other Federal Programs with Common Outcomes:

The U.S. Border Patrol enforces the immigration laws of the U.S. shoreside, while the Coast Guard has the lead at sea. The Immigration and Naturalization Service cooperates with the Coast Guard on the disposition of undocumented migrants who are detained. The Coast Guard regularly meets and coordinates with the State Department, INS, and the Border Patrol on immigration issues and potential international agreements. The Coast Guard regularly shares intelligence information with the other agencies regarding specific illegal migration trends and forecast. Discussions on common goal setting have begun, but common goal targets have not been established.

DIRECT NATIONAL SECURITY PROGRAMS				
Estimated Obligations (FY 1999-2001), in millions				
3/11/00				
		FY 1999 Actual	FY 2000 Estimated	FY 2001 Request
OFFICE OF THE SECRETARY		1	3	4
Office of Intelligence & Security		1	2	4
TPR&D	(Security projects)	-	2	-
COAST GUARD		1,021	958	1,049
Drug/Mig Interdiction	Operations	146	159	819
	Acquisition	111	52	69
	Research	3	3	4
Defense Readiness	Operations	15	64	13
	Acquisition	10	8	11
	Research	1	0	0
Reserve Training		14	12	13
FEDERAL AVIATION ADMINISTRATION		293	340	356
Operations	Civil Aviation Security	120	131	144
Facilities & Equip.	Explosive Det. Systems	100	100	100
	Other Security Programs	10	40	46
Research	System Security Tech	52	50	49
Airport Grants	(Security-related work)	12	19	16
MARITIME ADMINISTRATION		142	148	154
Maritime Security Program		95	99	99
Operations & Training	Merchant Marine Academy	32	34	31
	State Marine Schools	1	1	9
	MARAD Operations	8	8	8
RESEARCH & SPECIAL PROGRAMS ADMIN.		1	2	5
Research and Technology (CIP)		-	-	3
Emergency Transportation		1	2	2
TOTALS		1,451	1,449	1,568

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Corporate Management Strategies

DOT employs six overarching corporate management strategies in pursuing its strategic and performance goals. These corporate management strategies are a vital part of managing for results within DOT. Our strategic and performance goals set out what we aim to accomplish. Our corporate management strategies set out how we work to achieve those goals. These strategies cut across all organizational boundaries within DOT and are key to performing our missions efficiently and to providing our customers with consistent and seamless transportation policy and services. Most importantly, these strategies help us work better together, providing higher performance with the same organizational capacity and resources. A detailed discussion of these management strategies appears in Chapter XI of the DOT 1997-2000 Strategic Plan. Our managerial success will be measured by how well we implement our six management strategies.

ONE DOT: Work better together to build a transportation system that is international in reach, intermodal in form, intelligent in character, and inclusive in service.

1999 Results: We continued promoting ONE DOT thinking and acting to improve the national transportation system. The following are representative of our efforts and achievements:

- Identified 66 ONE DOT Flagships, which are initiatives critical to achieving the goals set out in the DOT Strategic Plan, and four Departmentwide management systems to undergo reengineering. Established intermodal teams and developed action plans for both Flagship and Systems Change teams.
- Conducted Partnering for Excellence workshops for cross-modal teams, including Flagship and Systems Change teams. The training provided tools for teamwork and development of integrated work plans for 3500 DOT team members.
- Extended the ONE DOT concept to the general workforce through a ONE DOT kickoff event. Held nine senior leadership meetings to (1) achieve a common understanding of the agenda for the next two years, (2) identify systems changes required to institutionalize ONE DOT, (3) integrate ONE DOT into the budget process, and (4) expand the leadership coalition in the Department to a larger number of individuals.
- Strengthened ONE DOT councils in regional offices. Collaborative activities included safety conferences, interaction with local communities on transportation issues, and youth education initiatives.
- Developed four alternative future scenarios that provide the context for transportation in the next 30 years in collaboration with stakeholders and customers. Preparing the scenarios began the process for developing the Department's next

Strategic Plan.

- Developed a ONE DOT model to recognize and reward employees for ONE DOT contributions; improved mobility among DOT's Administrations and Offices; and created a mechanism to share best practices and encourage institutional excellence throughout DOT (Team Excel).

FY 2000 Performance Plan Evaluation: During FY 2000 we are continuing to expand the ONE DOT thinking to achieve our mutual goals and to enhance our commitment to the national transportation system. We expect to be able to accomplish the milestones listed under the first four initiatives in the DOT Final FY 2000 Performance Plan. The Strategic Communication milestone has been revised to focus on improving the flow of internal communications among and between the operating administrations. In addition, the Partnerships with Federal Agencies initiative has been removed from this section since partnership initiatives are included under each of the goals as appropriate.

Strategies and Initiatives to Achieve 2001 Goal: During FY 2001, we will continue to implement our ONE DOT strategy by improving our ability to work better together and to plan for the future.

The Office of the Assistant Secretary for Administration will lead the implementation of our working better together initiative. Key 2001 milestones:

- Through Team Excel and the ONE DOT Benchmarking Council, share best practices and measure organizational excellence utilizing Baldrige-based internal assessments. Pilot the use of the Baldrige assessment in 14 organizational units and conduct 22 training sessions in measuring organizational excellence.
- Promote ONE DOT careers through mobility among middle management staff.

- Increase the number of inter-modal staff assignments by 5% over the total number for 2000.
- Conduct four Departmental leadership conferences to focus on the accomplishment of the strategic goals and further the ONE DOT concept. In addition, continue Partnering for Excellence training for teams.

DOT will continue its long range planning initiative led by the Office of the Assistant Secretary for Transportation Policy. The initiative will focus on improving strategic thinking and improving communication of strategic goals. Key 2001 milestone:

- Upgrade data for the annual performance report with emphasis on timeliness and data documentation.

Human Resources Management: Foster a diverse, highly skilled workforce capable of meeting or exceeding our strategic goals with efficiency, innovation, and a constant focus on better serving our customers now and into the 21st Century.

1999 Results: We made progress in implementing our Human Resource Management strategy by focusing on workforce planning, diversity management and employee development. The following are representative of our efforts and achievements:

- Developed a workforce planning guide and website to equip all parts of DOT with an eight-step process for workforce planning. Two organizations in the Department (RSPA/Volpe and MARAD) piloted the process for the Department and, by the end of the year, pilots for all organizations were selected for implementation during FY2000.
- Implemented the Secretary's Order on Diversity. All DOT organizations developed and initiated organizational assessments of their diversity climates.
- A ONE DOT Consortium on Learning Evaluation compiled reports of best practices and shared the results with all DOT organizations. Many DOT organizations are now using these tools to assess the effectiveness of their learning interventions.
- Completed the second year of using the balanced scorecard for evaluating Human Resource Management programs. The results will again be used to highlight best practices.
- Completed evaluation of the Performance Management Framework. Initiated changes to the

system, including directly linking the performance evaluations of the Senior Executive Service to the Performance Agreements with the Secretary.

FY 2000 Performance Plan Evaluation: Our plans for FY 2000 are on track. We expect to be able to accomplish all of the milestones in the DOT Final FY 2000 Performance Plan except selecting an HRIS provider, which has been deferred due to funding limitations. In addition, two milestones have been added: (1) cascading the Performance Agreement goals between the Secretary and Administrators or Departmental Officers to all SES within the framework of the Performance Evaluation system and (2) identifying and learning from partnership successes with our existing labor-management partnerships.

Strategies and Initiatives to Achieve 2001 Goal: During FY 2001, we will continue to focus on workforce planning Department wide, implementing the DOT Diversity Management Order, and supporting employees in getting the necessary learning and development they need to enhance individual and organizational performance. Key 2001 milestones:

- Complete workforce planning for key occupations and develop a Departmental workforce planning report.
- Implement a continuing workforce planning process for the entire workforce.
- Increase the number and competencies of the USCG military and civilian workforce to a level that ensures critical mission readiness.
- Evaluate effectiveness of actions taken to correct the barriers that keep all employees from reaching their full potential.
- Sponsor a Departmental Diversity Summit that will provide a central learning environment for the sharing of knowledge and critical skills necessary to create and maintain a managing diversity environment.
- Continue the implementation and expansion of the Department's Disability Resource Center (DRC) to ensure that DOT's employees with disabilities can participate fully and contribute to all aspects of the Department's work, programs, and services.
- Invest two percent of payroll for training consistently throughout the Department with a set-aside of .03 percent of payroll for Management Development.
- Evaluate the effectiveness of linking the Learning

and Development Framework with the workforce planning initiative.

- Identify developmental partnerships among DOT organizations for using technology to enhance employee learning opportunities.

Customer Service Management: Deliver the results customers' want through a government that works better, is more practical, and costs less.

1999 Results: DOT continued to involve our customers and partners at every level of decision-making and program delivery. Organizational entities serving each of the three principal modes of transportation -- aviation, marine and surface -- formed new alliances with partners and stakeholders throughout the year. The following are representative of our efforts and achievements:

- DOT sponsored several important conferences to engage stakeholders and partners in processes to develop objectives and strategies for achieving our strategic goals. Major conferences included the Secretary's National Safety Conference; a series of regional conferences focused on regional strategies for transportation safety; and the Marine Transportation System (MTS) National Conference. Local and regional committees were created to address MTS issues as follow-up to the MTS conference.
- The FAA conducted several Challenger sessions with the aviation community throughout the country. These sessions explored issues regarding the delivery of the Federal aviation services and operations.
- The Department sponsored the Spirit of Innovation in Transportation Conference to learn about innovations in transportation technology and how DOT can support and advance them to improve the transportation system.
- Extensive stakeholder involvement in the Department's scenario planning effort provided a wealth of information and an opportunity to test the credibility of the ideas and options being considered.
- Most DOT organizations completed customer service reports. These reports compare actual performance against the customer service standards that were previously established and provide the public with information regarding how customer feedback has impacted external and internal processes.

- FAA, MARAD, NHTSA and RSPA conducted customer satisfaction surveys with their respective customer, identifying areas of satisfaction and opportunities for improvement. These results provide important benchmarks from which to evaluate our future progress.
- The DOT Dockets initiative achieved its goal of providing the public access to on-line materials 24 hour a day, seven days a week.

FY 2000 Performance Plan Evaluation: During FY 2000 we are continuing to focus on strengthening our feedback mechanisms to ensure that our policies and programs are strengthened by customer feedback on how we deliver services and programs in support of an integrated transportation system. We expect to be able to accomplish all of the milestones in the DOT Final FY 2000 Performance Plan.

Strategies and Initiatives to Achieve 2001 Goal: During FY 2001, we will focus on two aspects of customer service management - customer focus, that is, involving the customer at every level of decision-making and our communications with customers. Clear and quick communications between DOT employees, with and from our partners, and to and from the American public are required and expected if our customers are to be fully engaged.

The Office of the Assistant Secretary for Administration will lead our customer focus initiative. Each operating administration will develop its own respective customer strategy to best serve its customers. Key 2001 milestones:

- Complete a third comprehensive Customer Service Report, comparing findings with FY 2000 data. Publicize progress made and areas for improvement to external customers and to DOT management and employees for appropriate action.
- Develop feedback mechanisms that target customer service and program improvements. These may include targeted customer surveys, consumer hotlines, bounce-back cards, electronic chat rooms, electronic regulatory public hearings, Conversations with America, focus groups, regional conferences, roundtables, stakeholder summits, and town meetings.
- Provide public outreach to assist communities across the country in addressing transportation issues. For example, the Safe/Livable Community delivery system promotes public information, education, and awareness on how to build safe,

livable, and sustainable communities.

An integrated management team headed by the Chief Information Office (CIO) is developing a plan of action to improve DOT's communications with customers to ensure that customers have easy access to accurate and timely information. The plan will divide communications into two major components: (1) information content (its value, understandability, timeliness and form) and (2) delivery (ease of use, reliability, access). The first component, information content, is addressed in this management strategy. The second, delivery (information infrastructure and other tools) is addressed in the Information Technology management strategy. Key 2001 milestones:

- Tailor information to customer/user needs. DOT will use focus groups, surveys, electronic monitoring tools, electronic chat rooms, etc. to determine how information can be presented better, what formats work best (e.g., brochures, newsletter; electronic bulletin board), what information is most sought after, and how to avoid proliferation of information that is duplicative, rarely used, or costly to produce.
- Issue user-friendly documents, review and rewrite existing documents in plain language as needed, and train and educate employees in writing more clearly to better communicate with the public, to increase trust in the government and to reduce the burden on the public.
- Redesign and maintain DOT Internet/Intranet websites to convey the ONE DOT message and to present and link information in ways that are customer-driven. The Office of Public Affairs, CIO, and the intermodal Internet committee will work together to accomplish this milestone.

Research and Development Management:

Advance transportation research and technology to shape a safe, fast, efficient, accessible and convenient transportation system for the 21st Century through strategic planning, world class research, better exchange of information on useful technological innovations, partnerships, and research education & training.

1999 Results: To implement its Research and Development Management strategy, DOT led Congressional (e.g., TEA-21) and White House National Science and Technology Council (NSTC) efforts to create a Federal strategic planning process for transportation R&D in partnership with state and local governments, industry and academia. The following

are our major efforts and achievements:

- DOT and NSTC released the *National Transportation Science and Technology (S&T) Strategy* and related plans. These documents: (1) focus public-private partnership, enabling research, and education and training activities on national transportation goals; and (2) help accelerate the use of innovative transportation products, processes and services in the market place. The process was positively peer reviewed by the National Research Council/ Transportation Research Board.
- The NSTC also released a *NSTC Transportation Strategic Research Plan* that starts to integrate and leverage research from other Federal agencies (notably DOD, DOE, EPA, DOC, NSF and NASA) to foster innovative solutions to the transportation challenges of the 21st century.
- DOT released its first *DOT Transportation R&D Plan* that integrates and focuses the R&D activities of the modal administrations on achieving the goals in the *DOT Strategic Plan, FY 1999 Performance Plan* and *National Transportation S&T Strategy*.
- In order to ensure that DOT R&D is world-class, the DOT research centers performed baseline self assessments of their performance using the Malcolm Baldrige or Presidents Quality Award criteria, ISO 9000 or Software Engineering Institutes Capability Maturity Model certification.

FY 2000 Performance Plan Evaluation: R&D is only one element of a broader process for transforming new technologies, concepts and ideas into new transportation systems, processes and services – the innovation process. As a result, the DOT Final FY 2000 Performance Plan. has been changed to reflect not only the importance of innovation in the transportation sector but also the vital role partnerships, research and education play in that process. In addition, the Department will not initiate the development of test beds at inter-modal terminals to demonstrate advanced security technologies and systems (Total terminal security), a public-private partnership identified in the FY2000 performance plan, because of the lack of funding.

Strategies and Initiatives to Achieve 2001 Goal: The public and private sectors recognize that sustaining an innovation climate into the 21st century will require:

- an educated and motivated workforce;

- investments in long-term enabling research;
- government-university-industry partnerships;
- a supportive legal and regulatory framework;
- a flexible manufacturing capacity;
- access to investment and venture capital;
- an entrepreneurial culture; and
- vital markets.

More specific description of these elements are documented in the National Science and Technology Council (NSTC) *Transportation Science and Technology Strategy* and related implementation plans, the NSTC report *Public/Private Partnerships: Implications for Innovation in Transportation* and the *DOT Transportation R&D Plan*.

The Department and the NSTC are applying these elements to transportation R&D through a peer-reviewed, government-wide strategic planning and management process. The process steers and guides government, industry and academic science and technology investments to address the nation's transportation goals and create an innovation environment that accelerates new technologies, concepts and ideas into the transportation system. The preliminary elements of the process are in place and are codified into law in the Transportation Equity Act for the 21st Century.

The Department's Research and Technology Coordinating Council in conjunction with the Operating Administrations and Secretarial Offices have the responsibility for improving R&D management within the Department. Key 2001 milestones:

- Update the *DOT Transportation R&D Plan* to ensure the Department's R&D activities: support the DOT strategic goals; foster innovation by encouraging world-class enabling research and workforce development; and address the provisions of TEA-21 and FAA authorization.
- Provide decision makers with complete, accurate and timely information on the Department's R&D activities by deploying an initial operating capability in FHWA for the DOT R&T tracking system.
- Conduct an annual National Research Council peer review of the Department's R&D program to ensure a balanced portfolio that addresses the critical long-term needs of the Department and the nation.

The Department will also (1) ensure that in-house R&D organizations have world-class transportation R&D capability, (2) develop and extend public-private partnerships to enable greater information diffusion, quicker product development, and faster rates of learning, (3) advance the areas of enabling research identified in the NSTC *National Transportation Strategic Research Plan*, February 2000 and (4) build on the work of the Department's University Transportation Centers and other education and training activities to implement a departmental University Research and Education Program (5) identify solutions for our maritime transportation challenges through the new cooperative Marine Transportation Research Program. Key 2001 milestones:

- Assess R&D organization performance relative to the FY 2000 baseline, using Malcolm Baldrige Quality Award Criteria, ISO 9000, or the Software Engineering Institute's Capability Maturity Model certification.
- Develop an action plan as part of the annual NSTC report *Public/Private Partnerships: Implications for Innovation in Transportation* that identifies ways to eliminate regulatory and legal barriers to innovation and "best practices" to accelerate the innovation process. Focus will be on the implementation of the *Partnership for the Advancement of Infrastructure and Its Renewal – Transportation* that is identifying ways to bring innovation to the transportation construction industry.
- Leverage and focus ongoing long-term research activities in the Department and across the Federal government by bringing together the research and transportation communities to identify areas for collaboration. The Department has identified four top priorities for enabling research, which are cross-cutting and require long-term efforts: Human Performance and Behavior, Advanced Materials/Nanotechnology, Energy Conversion and Storage, and Computer, Information, and Communication Systems.
- Implement the *DOT University Research and Education Plan*, February 2000.
- Serve as a resource for the Garrett A. Morgan Technology and Transportation Future Program.

Information Technology Management: Improve mission performance, data sharing, system integrity, communications, and productivity through deployment
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of information systems which are secure, reliable, compatible, and cost effective now and beyond the year 2000.

1999 Results: DOT continued to implement its information technology management strategy. At the end of FY1999:

- We met all of our Y2K goals. 100% of all DOT mission-critical IT systems were Year 2000 (Y2K) compliant.
- The goal of a 5% reduction in burden hours from FY 1998 was not met. There was a .3% *increase* in burden hours imposed on the public, largely as a result of implementation of statutory mandates and improving transportation safety. Were it not for the statutory mandates, there would have been a *decrease* of 1.5 million burden hours or 1%. Further, as a result of a zero-based regulatory review currently being conducted by the Federal Motor Carrier Safety Administration, it is anticipated that a Notice of Proposed Rulemaking will be issued soon. When this happens, an estimated 26% reduction in burden hours will be realized.
- 90% of the cost and schedule goals for DOT's major IT investments were met without reducing performance capability.
- 53% of all DOT employees received general security awareness training, and specialized security training was developed for system administrators. We were unable to meet our goal of 60% due to resource constraints (staff and funding). Resources were limited by the requirements of the DOT Y2K program. With the successful completion of the Y2K program, DOT will be able to devote more resources to this effort and the goal of training 100% of our workforce by the end of FY 2000.

FY 2000 Performance Plan Evaluation: We have revised our Information Technology strategy to put a greater emphasis on improving communications through ensuring information is easily accessible to all (including people with disabilities) and through better integration of our many IT systems. Additionally, we have made the following changes to our current year's action plan:

Productivity Enhancement – We have deleted the milestone to identify three major Departmental business/work processes where applying reengineering has the potential to achieve at least a 5% time and/cost

savings and have replaced it with a higher priority item – accessibility. We have added the milestone “Ensure all DOT IT systems are accessible to all persons with disabilities” to comply with the revised Section 508 of the Rehabilitation Act of 1973.

Also, due to external factors (e.g., transportation incidents and newly enacted or revisions to laws) that have generated new data collection requirements, we have revised our milestone on paperwork burden hour reduction to read “take actions that contribute towards achieving a 5% reduction in burden hours (from FY 1999) as determined through the established DOT Information Collection Budget database.”

Integrated Communications – We have added a new milestone that reads “at least 50% of DOT organizations will use a ONE DOT secure electronic messaging system and a standard office automation software suite to facilitate communications.”

IT Infrastructure and Investments – We have revised the current IT investments milestone to add “Establish an IT investment process to review significant IT expenditures for ONE DOT cross-cutting opportunities and ensure that 90% of the cost and schedule goals will be achieved without reducing the performance or capabilities of the items or services being acquired.” This change recognizes the importance of establishing a DOT capital programming process to carry out the requirements of the Clinger-Cohen Act.

Innovation and Partnership – We have deleted the electronic signature milestone. We have replaced the milestone “Identify and disseminate new and emerging IT for use by DOT public and private partners...” with “Through a newly deployed IT Reinvention Lab website, provide ONE DOT opportunities for DOT public and private partners to exchange information about new and emerging IT.”

Management Challenge – Computer Security In response to Presidential Decision Directive 63 (PDD-63), DOT has identified its critical IT assets as residing within the FAA and US Coast Guard (no other DOT systems meet the criteria of PDD-63). Critical IT assets have been identified and plans are under development to evaluate, remediate, test and certify these systems in accordance with existing Federal IT Security policy and guidance (Computer Security Act of 1987, OMB Circular A-130, PDD-63, NIST guidance, etc.).

Risk assessments are an important step in this process and will be conducted for all PDD-63

systems. To judge our progress, we have set the following goals:

- 100% of risk assessments will be completed by November 2002.
- 100% of remediation and testing will be completed by May 2003.

These and other steps will ensure that DOT systems are adequately protected by the deadline of May 2003.

While FAA and USCG are the only DOT operating administrations (OA's) that have IT assets that meet the criteria of PDD-63, other OA's are developing plans to assess their assets as required by OMB Circular A-130. DOT has established an IT Security Policy that requires all DOT IT systems be assessed to identify vulnerabilities, evaluate and mitigate these where justified, and then test and certify that adequate protection has been implemented. To judge our progress, we have set these goals for DOT systems:

- By September 30, 2000 DOT Office of the CIO will develop an overall IT Security Program Plan for DOT.
- By September 30, 2000 DOT will provide IT Security Awareness Training to 100% of our workforce.
- By March 30, 2001 DOT OAs will develop an overall strategy/plan for ensuring their IT Assets are in compliance with OMB Circular A-130.
- By September 30, 2001 DOT will assess, test, and certify no less than 25% of our IT assets.

The **security of accounting systems** is particularly important. Our systems include numerous automated security mechanisms, including password controls. Password integrity is reinforced for all accounting staffs, and last year the CFO completed a recertification of all system users to ensure they were current and authorized personnel.

Third party networks introduce an additional concern. In November 1998, the DOT CIO also required all OA's to obtain Memorandums of Agreement with any outside entities that connect to DOT IT networks. These agreements will ensure that outside users of our networks understand and abide by DOT IT Security Policy.

Strategies and Initiatives to Achieve 2001 Goal: The

DOT Chief Information Officer (CIO) will lead intermodal efforts to ensure the continued security of our transportation information systems to make IT systems less vulnerable to attack and other service disruptions, including those caused by natural disasters. The milestones for the security initiative are included in the Computer Security Management Challenge box.

The DOT CIO will work collaboratively with other Departmental organizations to execute the delivery component of the action plan to improve DOT's customer communications and to effectively manage its substantial IT infrastructure and investment portfolio. The DOT IT community will also continue to engage in activities focused on productivity enhancement. Key 2001 milestones:

- Adopt a ONE DOT secure electronic messaging system and a standard office automation software suite Departmentwide to facilitate communications and enhance productivity, as well as deployment of new web-enabled applications and WebPages.
- Review of all DOT's critical, cross-cutting, and/or high dollar value IT investments through an established Departmental IT Investment Process and recommend program continuation, modification, or termination to the Secretary.
- Take actions that contribute to achieving a 5% reduction in Information Collection burden hours from FY 2000.

Resource and Business Process Management: Foster innovative and sound business practices as stewards of the public's resources in our quest for a fast, safe, efficient and convenient transportation system.

1999 Results: During FY 1999, we continued to implement our Resource and Business Process Management strategy in a variety of areas. The following are major accomplishments by area:

Budgetary Management

- Established a capital planning process for major capital programs in the Department and issued guidance on implementation to all operating administrations.
- Instituted a significant change in the budget formulation process to link budgeting more directly with performance planning.
- Initiated six program evaluations to assess program performance in support of DOT's outcome goals.

Financial Management

- DOT received a clean audit from the Inspector General on its Consolidated Financial Statements for Fiscal Year 1999.

Rulemaking

- Implemented electronic participation in rulemaking.
- Through three roundtables for industry and the general public, determined additional efforts to make to improve the rulemaking process.

Acquisition Management

- Increased the percentage of the procurement workforce meeting the educational requirements of the Clinger-Cohen Act to 43% and the percentage meeting the training requirements to 27%.
- Increased use of purchase cards to over 85% of the simplified acquisition actions. In addition, the amount of dollars spent using purchase cards increased by 10% over FY98.
- Achieved a customer satisfaction rating of 82% based on the Procurement Performance Measurement Model. This was the first year that all DOT procurement offices participated in measuring their customer satisfaction level. We received over 1000 responses which is the largest response rate DOT has experienced using this model.

Managerial and Operational Flexibility

- Implemented the Waiver Policy developed in FY 1998.
- Developed a Departmental waiver website and began posting waiver requests. An intermodal group reviewed the entire process and identified areas for improvement.

FY 2000 Performance Plan Evaluation: The efforts that were begun in FY 1999 are continuing in FY 2000. We expect to be able to accomplish all of the milestones in the DOT Final FY 2000 Performance Plan.

Strategies and Initiatives to Achieve 2001 Goal: The Office of Financial Management will lead the initiative to improve DOT financial management by building and improving our systems and practices to support unqualified audit opinions and provide reliable and timely financial information for decision makers.

Management Challenge – DOT Audited Financial Statements

Fiscal Year 1999 marks DOT's fourth audited consolidated financial statement under the Government Management Reform Act's requirement to prepare audited financial statements for *all* DOT activities. Prior to this, financial statements were limited to trust, revolving and commercial funds. The introduction of all DOT activities to the Department's financial accounting has presented a significant management challenge, requiring DOT to develop more comprehensive cost accounting systems, and – most critically – to develop improved record keeping and valuation procedures for property, plant, and equipment. This last requirement has been a significant challenge for the FAA and U.S. Coast Guard, whose direct provision of services to the public involves significant capital assets (ships, planes, and facilities). DOT has tackled its financial management challenges full force. As expected, audits of the FY 96-98 consolidated financial statements have contained qualifications and disclaimers, but all the while DOT has made real advances towards an "unqualified" opinion.

FAA and the U.S. Coast Guard are addressing asset management problems through detailed corrective action plans extending over multiple years and involving numerous offices. FAA has initiated actions that will provide an integrated financial and asset management solution. Requirements for new financial statement formats are being addressed in the Department's current core accounting system and with the implementation of a new DAFIS Financial Statements Module II. Complete resolution will be assured with the full implementation of Delphi, the Department's commercial off-the-shelf core accounting system replacement, which is currently scheduled for June 2001.

As a result of these efforts, the FY 1999 audit resulted in all Departmental financial statements receiving unqualified opinions for the first time. In addition, seven Departmental weaknesses were identified which will require corrective actions.

Management Challenge – FAA Financial Management

There is a concern on the part of government, industry and passengers that FAA be efficient and prudent in its use of funding.

The Administration has proposed FAA reauthorization legislation that would establish an air traffic services Performance-Based Organization (PBO). The PBO would be authorized to establish more efficient, service-based fees and would have the managerial flexibility to operate on a more business-like basis, thereby improving the efficiency of FAA's delivery of air traffic control services. In late March 2000, the Congress was in the final stages of enacting an authorization bill for FAA that does not provide for the PBO or service-based fees.

To judge their progress in advancing their financial management, FAA has set these goals:

- Convert to the DELPHI accounting system in FY 2001.
- Achieve clean audits in FYs 2000 and 2001.
- Implement cost accounting throughout the agency by FY 2002.
- Establish fees for the provision of ATC services to Overflights (expected to recover over \$20 million in FY 2001).

Management Challenge – GPRA Implementation

While the implementation of GPRA is a challenge, it's also an enormous opportunity for DOT programs to improve their management and demonstrate the value we create, every day. Throughout this combined plan and report, we have advanced our understanding of how to better integrate measurement into our management processes. Our verification and validation section and our data details reflect both improvements in our data, and an improved understanding of the quality of the measurements that underpin our decisions. Following our "dry run" report in 1998, we have been able to improve reporting from 63% to 90% of our measures. We intend to continue to improve our processes every year.

A key challenge we face is to better integrate performance measures into our Consolidated Financial Statements. Based on recommendations contained in the Office of Inspector General (OIG) Audit Report on the DOT FY 1998 Consolidated Financial Statement, the Department took action to improve its presentation of performance measures in the management discussion and analysis (MD&A) section of the DOT FY 1999 Consolidated Financial Statement.

The Office of the General Counsel will work with the operating administrations and the public to improve the Department's rulemaking process with the objective of developing rules that advance our goals without needless impact on business. Key 2001 milestones:

- Present a Department wide training course on rulemaking to ensure compliance with new and existing regulatory requirements.
- Implement a new, structured process for reviewing existing regulations to identify what can be done to minimize the regulatory burden.

The Office of the Senior Procurement Executive (OSPE) will lead in implementing the initiative to improve DOT acquisition by creating and promoting business processes that provide best value products and services that advance DOT's strategic goals; implementing a coordinated and comprehensive electronic commerce program; and strengthening DOT's acquisition work force. Key 2001 milestones:

- Enhance the capability of the Electronic Posting System (EPS) to allow for the electronic receipt of proposals.
- Increase customer satisfaction with the DOT acquisition system by 5% over the FY 2000 satisfaction level and achieve a procurement employee satisfaction rating of 80%.
- Achieve 85% of the goals established in FY2001 under DOT's Procurement Performance Management System for both evaluating the effectiveness of DOT's internal procurement business processes and carrying DOT's fiduciary responsibilities in its procurement programs.
- Increase the percentage of the procurement workforce meeting statutorily based educational requirements to 50% and training requirements to 50%.

During FY 2001, the Office of the Assistant Secretary for Administration will lead the Department in broadening the scope of the managerial and operational flexibility initiative to further maximize flexibility and operational efficiency throughout DOT. Key 2001 milestones:

- Develop an educational campaign, which includes publicizing and promoting successes via electronic communication, convening roundtables to share best practices from successful innovators and innovative teams, and other strategies to encourage employees to initiate and adopt innovations.

- Develop employee incentives that reward innovative initiatives.
- Evaluate the success of the waiver process and the reinvention labs and determine needed action.

The Office of the Assistant Secretary for Administration in conjunction with the Operating Administrations will ensure that all DOT facilities meet the highest Federal capital assets management “standards” in terms of accessibility, energy conservation, security systems, technology and maintenance. Key 2001 milestones:

- In accordance with E.O. 13123 “Greening the Government through Efficient Energy Management,” use 24.5% less energy per square foot compared to our use of 140,599 BTUs per gross square foot in FY 1985.
- In accordance with E.O. 13101, “Greening the Government through Waste Prevention, Recycling and Affirmative Procurement,” designate a recycling coordinator for each facility who will be responsible for implementing and operating waste prevention and recycling programs.
- Increase the number of completed transition plans for removing physical barriers to access DOT conducted programs and activities. At the end of FY 1999, there were 417 plans, and 137, or 33%, were completed.
- Begin implementation of the plan developed in FY 2000 to protect DOT’s critical physical assets that meet the requirements of the President’s Policy on Critical Infrastructure Protection (PDD-63).
- Implement the Federal Worker 2000 Presidential Initiative to improve management of occupational safety and health and workers’ compensation programs through FY2004. In FY 2001, achieve the following reductions below the Department of Labor baseline: (1) reduce our overall injury rate by 3 percent, (2) reduce injuries at our facilities with the highest injury rates by 10 percent; (3) improve timeliness of reporting injuries to DOL by 5 percent; and (4) reduce the number of days our injured employees spend away from work by 2 percent.

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Data Verification and Validation

All data are imperfect in some fashion. Pursuing “perfect” data, however, may consume public resources without creating appreciable value. For this reason, verification and validation of measured values and understanding data limitations are critical elements in managing for results.

Verifying & Validating Performance Measures

Integral to performance measurement is understanding data limitations, correcting these limitations where necessary and cost-effective, and acknowledging those that remain when interpreting results. This section on verification and validation provides a DOT-wide overview of our plan for assessing the quality of the data DOT uses to measure its performance.

Virtually all data have errors. In Appendix I we have provided the following information about the data used for each performance measure: source of the data, limitations of the data, observations about the quality of the data, work planned or ongoing to improve data quality, and any known biases.

Additionally, we have compiled a compendium of DOT Source and Accuracy Statements for each of the data programs used in this report. The Source and Accuracy Statements give more detail on the methods used to collect the data, sources of variation and bias in the data, and methods used to verify and validate the data.

By validating data used in the DOT performance plan, we are ensuring that those data are reflective of the phenomena they purport to measure. However, whether certain data are appropriate to use for measuring performance may be another matter. The DOT Office of Inspector General (OIG) plans to selectively verify and validate performance measurement data each year. When pertinent to the conduct of ongoing projects, OIG will also assess performance measures to determine their appropriateness for measuring progress toward stated goals. These assessments may lead to changes in the goals, improvements to or additions of data collection systems, or both.

Assessing and, where possible, eliminating sources of error in DOT data collection programs has always been an important task for data program managers. As a part of their ongoing work, managers of Departmental data programs use quality control techniques, such as flowcharting the data collection process, to identify where errors can be introduced into the data collection system. Program managers also use computerized edit checks and range checks to minimize errors that may be introduced into the data of their respective

programs. In addition, quality measurement techniques are employed to measure the effects of unanticipated errors. These include validation of data collection and coding, as well as coverage, response and non-response error studies to measure the extent of human error affecting the data. As sources of error are identified, steps are initiated to improve the data collection process.

The data used in measuring performance come from a wide variety of sources. Much of the data originates from sources outside the Department and, therefore, outside the control of the Department. The data often come from administrative records or from sample surveys. While DOT may not have a strong voice in improving the quality of outside data, the Department takes all available information about the limitations and biases known to exist in outside data into account when using the data.

The myriad data sources makes the task of assessing and, where possible, eliminating error a challenging one for DOT. Different data systems contain different types of errors. For example, data from administrative records systems may have missing or incorrect records and data from sample surveys will contain sampling error.

Several measures (particularly in safety) require aggregation across transportation modes. This can be particularly problematic because of the use of different definitions in different transportation modes. Also, data from outside the Department may have unknown error properties.

To help the operating administrations address these issues, the Bureau of Transportation Statistics (BTS) is developing a statistical policy framework where the operating administrations will work together to identify and implement the current, best statistical practice in all aspects of their data collection programs. This project is consistent with the data capacity discussion found in the DOT Strategic Plan.

In accordance with the DOT Strategic Plan, in 1998 BTS established an intermodal working group to address data quality issues in DOT data programs. This group continued work in 1999 to:

- develop departmental statistical standards
- document limitations and known errors and biases

in data by creating Source and Accuracy Statements for all DOT data programs

- ☐ review and suggest improvements in quality assurance procedures
- ☐ evaluate sampling and nonsampling errors
- ☐ coordinate data definitions with other programs (where appropriate)

BTS's statistical staff is consulting with modal data program managers in the validation and evaluation of their data and in developing standard documentation of the sources and reliability of estimates used to measure performance.

The Inspector General (IG) plans to selectively verify and validate performance measurement data each year. When pertinent to the conduct of ongoing audit activities, the IG will also assess performance measures to determine their appropriateness for measuring progress toward the goal. These assessments may lead to changes in performance measures, improvements to or additions of data collection systems, or both.

Managers of departmental data systems use methods for validating and verifying data that fall into the following broad categories:

- ☐ Compare with previous data from the same source.
- ☐ Compare with another reliable source of the same type of data within DOT for the same time period.
- ☐ Compare with another reliable source of the same type of data within DOT for a previous time period.
- ☐ Compare with another reliable source of the same type of data outside DOT for the same time period.
- ☐ Compare with another reliable source of the same type of data outside DOT for a previous time period.

In addition to computerized edit checks and clerical review procedures to look for outliers, duplicate records, and data inconsistencies, when a validation process is internal to the data collection system, it includes a number of procedures to verify and validate data quality at each step of the data collection process. These include:

- ☐ Recollecting/reinterviewing all (or a sample of) records and reconciling with the original collection. This type of operation applies to census or sample survey data collections from administrative records, organizations, or individuals.

- ☐ Conducting 100 percent (or a sample of) data recoding and reconciliation operation to assess and correct coding errors.

- ☐ Conducting 100 percent (or a sample of) data reentry and reconciliation operation to assess and correct data entry errors.

The American Travel Survey's reinterview program, in which a sample of households were recontacted and differences reconciled, is an example of a verification system within a data collection program.

Data Limitations in Performance Measures

Limitations to Data Sources within DOT – The most significant limitation to DOT data being used for performance measurement is timeliness. Some DOT data collection systems do not collect data on a yearly basis. For example, the Nationwide Personal Transportation Survey, the American Travel Survey, and the Commodity Flow Survey each collect data every five years.

Systems that do collect data each year (or more frequently) usually require processing time at the end of data collection to prepare the estimates. For example, data from the Highway Performance Monitoring System that measures vehicle miles traveled (VMT), require post-data collection processing and are generally not available until several months after the end of the calendar year in which they were collected.

One way DOT will deal with this limitation is to compile preliminary estimates from the portion of data that are available in time to report on the performance measures. For example, fatality data from the first six months of the year could be compared with the first six months of the previous year for an initial estimate of performance.

Other limitations to performance measurement data can be found in the Source and Accuracy Statements for DOT data programs. This documentation contains descriptions of the design of the data collection programs, estimates of sampling error (if applicable), and discussions of nonsampling errors. Nonsampling errors include undercoverage, item and unit nonresponse, interviewer and respondent response error, processing error, and errors made in data analysis.

As part of its mandate in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the Transportation Equity Act for the 21st Century (TEA-21), and its plans for a statistical policy framework in

the Department, BTS is working on a program of research, technical assistance, and data quality enhancement to support the continued improvement of data programs in DOT. This program is designed to help data program managers across DOT communicate about new methods for improving their data quality and to document better what they know about the limitations of their data. BTS is also working as an independent consulting resource within DOT to help the modal administrations with their data-collection and documentation work.

Limitations to External Data Sources - Timeliness is also a significant limitation for external data, and can be out of DOT's control. Other limitations of external data are noted in the comments for each performance measure in Appendix I. In some cases, DOT has replaced external data, where little is known about the quality of the data, with internal data. For example, estimates of person-miles traveled (PMT) from private organizations have been used by DOT in the past in the absence of any better estimate. With the recent release of the 1995 Nationwide Personal Transportation Survey and the 1995 American Travel Survey, DOT now has data with known error properties that it can use to estimate PMT.

Many of DOT's internal data programs rely on the state DOTs to collect reliable statistics within cost constraints. While we work closely with our state DOT partners, we do not have direct control over this phase of the data program.

Our Data Needs

In Transportation Statistics Beyond ISTEA - Critical Gaps and Strategic Responses, BTS has summarized gaps in transportation statistics that limit our knowledge about the effectiveness and efficiency of the nation's transportation system. These gaps in the available data also limit our ability to measure the success of DOT's programs. Some of the gaps outlined in the publication are:

- ☐ Freight transportation costs
- ☐ Timeliness and reliability of the transportation system
- ☐ Domestic movement of international trade
- ☐ Traffic congestion and the costs of delay time
- ☐ Internal travel of foreign visitors and U.S. travelers to other countries
- ☐ Vehicle-miles traveled (accurate and consistent across modes)

☐ Passenger vehicle inventory, age, and occupancy

While data exist on some of these items, they are either incomplete or flawed in some other way to hinder accurate, national estimates.

Work is underway to examine cost-effective ways of improving existing data collection programs and information systems to capture this information. For example, the Federal Highway Administration is examining how to use intelligent transportation systems technology to estimate hours of delay per 1,000 vehicle miles. This would be used as a better measure of traffic congestion than a volume to capacity ratio, which does not take the extent or duration of delay into account.

DOT is also working toward an expansion of the current Transportation Inventory and Use Survey (TIUS) from a 5-year survey to one conducted annually with additional components to capture passenger vehicle inventory, age and occupancy. We are also considering a new program to capture data on domestic transportation of international goods. DOT is in conversations with the Canadian and Mexican governments to establish data exchange programs for data on Canadian and Mexican travelers in the U.S. Data on foreign travelers from overseas requires additional coordinated efforts with the Department of Commerce.

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